

small air forces observer

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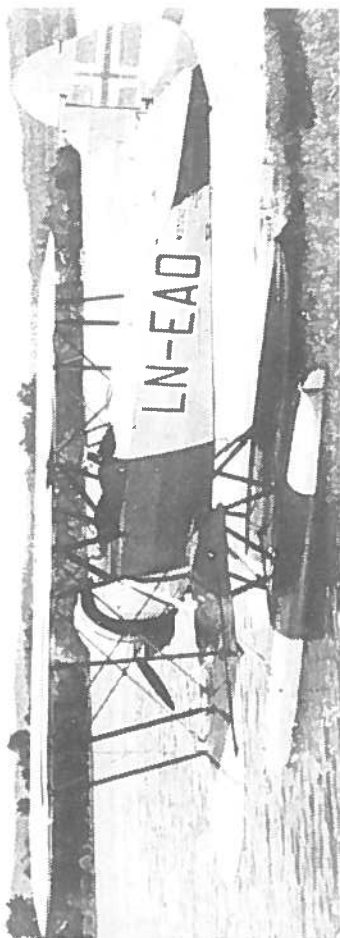
SMALL AIR FORCE ALOUETTE IIIs
MEXICAN GOODWILL FLIGHT OF 1929
NORWEGIAN CAPRONIS
POLISH PZL P-11c and SUPER ELECTRA
BELGIAN AIR FORCE EMBLEMS

vol. 15 no. 1 (57)

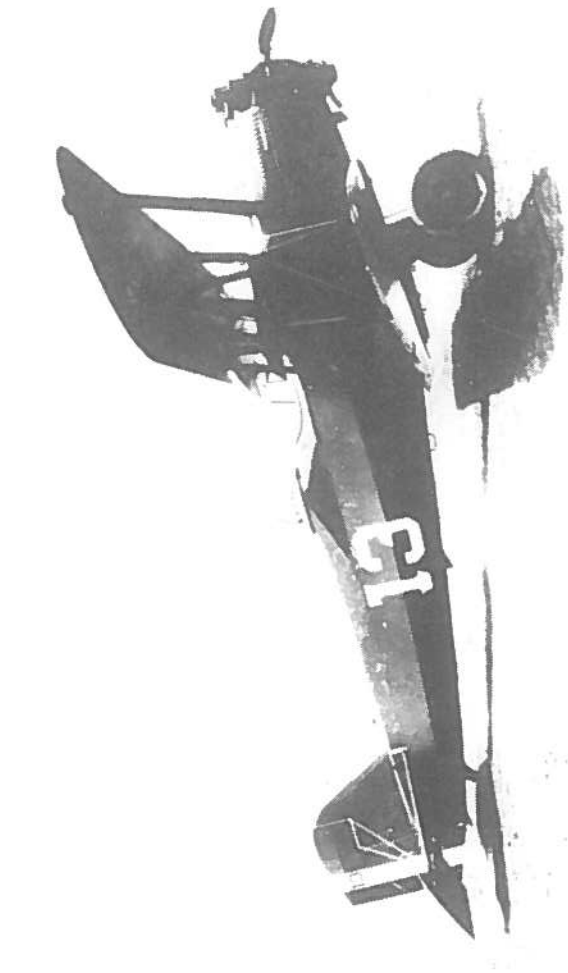
January 1991



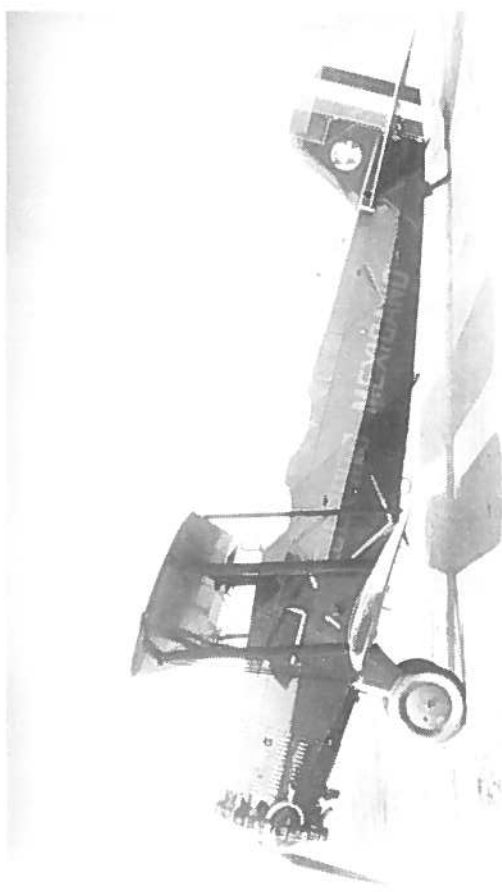
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SMALL AIR FORCES OBSERVER

The Newsletter of the Small Air Forces Clearing House

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SAFO EDITORIAL POLICY: The purpose of the SAFCH is to "promote interest in the history and modeling of the aircraft of the smaller countries". In support of this goal, the SAFCH encourages international cooperation in researching the history of aviation on all aspects of aviation, both military and civil, from all periods of time, and for all the smaller countries. In return for this support, members are asked to submit occasional progress reports for publication in the SAFO. While the final results should appear in the most prestigious publication possible, it is requested that the SAFCH be mentioned (with address) in the article and that SAFO be afforded the opportunity of reprinting the material.

SUBSCRIPTION RATE: Subscription to the current volume of the SAFO is US \$9.00 for 4 issues per year in the USA and \$10.00 elsewhere via surface mail. For air mail delivery, add \$8.00 for Europe and Latin America or \$11.00 for Asia, African, and Australia. Payment should be made in cash, by International Money Order, or by a check from a bank with a subsidiary in the US. (There's a \$25 charge to cash a check from a bank without a US subsidiary.) New subscriptions begin with all issues of the volume current at the time payment is received; if you desire otherwise, please specify with your payment which issues are desired. Send remittance to Jim Sanders, 27965 Berwick Dr., Carmel, CA 93923 USA. You can also have your bank transfer money directly to my bank: Routing #3220-7021-3; Coast Savings & Loan, 137 Carmel Valley, 27845 Berwick Dr., Carmel, CA 93923; Credit to James V. Sanders, Account #03105350.

BACK ISSUES: Either Back issues or Xerox copies of out-of-print issues are available for all issues of the SAFO published. For a list of back issues and

their posts, see the "SAFCH Sales Service" sheet in this issue. For a list of all issues and their content, send two 1st class stamps (or 2 IRCs) to the editorial office.

SPONSORSHIP PROGRAM: To keep the SAFCH truly international, our Sponsorship Program allows persons who can not obtain US currency to receive the SAFO. Any SAFCH member interested in sponsoring a SAFO subscription for a person in Eastern Europe (or other country where it is impossible or difficult to obtain US currency) should write to the editorial office for a list of persons seeking sponsors. If you would like to receive the SAFO but can not obtain US currency, a list of SAFCH members looking for someone to sponsor is also available from the editorial office.

INFORMATION FOR AUTHORS: Manuscripts may be submitted in any form; authors whose first language is not English may submit a rough translation of the text and the editorial office will put it into good English. Authors using a computer should send the manuscript on disc. Photo should be black and white prints although color prints can be used. If you want any prints returned and if you do not want them to be cut, please, mark "Return" and "Do not crop" on the back of the print. All art work must be ready for printing. It is best to plan for the art to be reduced to 75% in printing and the finished drawing should fit into the 7.5 inch by 10 inch working area of the final page. Art work that does not fit this requirement will have to be cut and pasted to fit; no problem, but things might not look exactly as you want them to look. All work for the SAFO is voluntary and no payment can be made for published material.

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LOST MEMBERS: Anyone knowing the whereabouts of the following 'lost' SAFCH members please inform the editorial office (last known address included): Bruno Dauzie, 1 rue des M. de Chateaubriand, 94490 Ormesson, France. Alain La Pierre, PO Box 2102 2102A, Les Delicias, Maracay, Venezuela. Michael Parr, #124 101 Tabor Blvd., Prince George, B.C. Canada V2M 6Y1.

CORRECTIONS: The author of the article "Some Notes on the Latvia Air Force" that appeared in SAFO #56 without a byline has been identified. It is E. R. Webber (SAFCH #923), 6953 Arboreal Dr., Dallas, TX 75231. Sorry for misplacing your byline, Rick.

EDITORIAL: After years of dreaming about producing a line of SAFO kits, it looks like it may be a possibility. A member of the cottage industry has offered to cooperate in producing a kit of an aircraft chosen by SAFO readers. He says the following things should be considered in making a decision: (1) The subject should be small enough to fit in our standard box. (2) The subject should be in 1/72 scale. (3) The subject should be research to the nth degree, with really good plans and as many foreign markings as possible; at least 3 different small air forces. (4) I'll have the master prepared and do the instruction sheet and box. If possible, I'll have (blank) do the kit injection molded." I left out all names so as not to raise anyone expectations too high. I don't necessarily agree that the aircraft must have been used by be at least three different air forces; I can think of a lot of great subjects that were used by only one air force.

This looks like a great opportunity. The first step is to select a suitable subject. To help me with this selection, I would like to conduct a poll of SAFO readers. Please fill out the ballot at the bottom of the Sales Service page and send it to me before 1 May 1991. I'll correlate the top choices against the above criteria and pick a winner. This should be a lot of fun. Also, give some indication of the number of SAFO kits you would buy, so we can have some idea of an appropriate number of kits to produce.

COVER COMMENTS: Our cover story this issue is the little-known story of the goodwill flight to South America by a Mexican Douglas O2M named "Ejercito Mexicano". Front Cover: Douglas O2M, '21' and '17' of the 2/o Squadron, 1/o Air Regiment, Mexican Air Force. A total of 9 of these were ordered and delivered in 1929. (via Flores) Back Cover: Crew of the "Ejercito Mexicano". Sgt. Mecanico Arnulfo Cortes Benavente (right) and Col. Pablo L. Sidar (left). Photo dated 8-22-29. (McDonnell Douglas Corp. via Flores) Also see the photo page.

PHOTO PAGE: a. Caproni Ca-310, serial 507. The camouflage is a base green with a mottle of sand sprayed over; the undersurfaces appear to be aluminum but perhaps they are light grey, the standard Regia Aeronautica color. The Norwegian markings appear on the rudder and below each wing. Was it was Norwegian practice not to place markings on the upper surface? (Nowarra via Thompson) b. Breda 28 floatplane with civil registration. (Bignozzi via Thompson) c. Douglas O2M '13', 2/o Escuadron Aereo, 1/o Regimiento Aereo, Fuerza Aerea Mexicana. (Hagedorn via Flores) d. Douglas O2M '18' "Ejercito Mexicano" was used for the Mexican goodwill flight to South America in 1929. (McDonnell Douglas via Flores)

AUSTRALIA

AUSTRALIAN PLASTIC MODELLER'S ASSOCIATION (APMA, PO Box 51, Strathfield, NSW 2135; 4 issues sea mail A\$27; air mail A\$30). 3/90 (24 pages) "RAN Sycamore" 2 pages including one side-view drawing. "Winjeel Update - 76 Sqn" one page including 2 side-view drawings. "Fly by Night" 4 pages including 7 side-view drawings (Bf-109, FW-190, Hurricane, Defiant, & CR-42). "Royal Tiger and Chipmunk" one page of 2 side-view drawings (Royal Aero Club). "PR Wildcat" 1/2-page side-view drawing of USN F4F. "Zerstory" 6 pages including 7 side-view drawings and sketches showing differences among variants. "Jabo: Hit & Run" 3 pages including top/side-view drawings of Bf-109F & FW-190A. "Dix' Delta" 3 pages including 1/72-scale 5-view drawing of RAF Northrop Delta. "1st Griffon Seafire" 2 pages including 3 side-view drawings of the Seafire F-XV.

NEWS AND VIEWS (IPMS NEW SOUTH WALES, PO Box 637, Broadway, NSW 2007; 4 issues A\$20.00 surface or A\$25.00 air mail). 3/90 (28 pages) Battle of Britain 50th Anniversary Special Issue. "Spitfires & Hurricanes in the Battle" 10 pages including 21 side-view drawings. "Messerschmitt 110s in the Battle of Britain" 3 pages including 3 side-view drawings. "Kampeggruppe 100 in the Battle of Britain" 2 pages including one side-view drawing of an He-111H-3. "Emils in the Battle of Britain" 6 pages including 12 side-view drawings. "German heavy Metal" 4 pages including side view drawings of Do-17Z, Do-18G-1, & Ju-88A-1.

AUSTRIA

OFH NACHRICHTEN (Oesterrichische Flugzug Historiker, Kannwegasse 1/15, A-1150, Wien). 3/90 (32 pages) "Caproni Ca-100" 4 pages including one photo and a 2-page 1/72-scale 5-view drawing.

BELGIUM

KIT (IPMS Belgium, Te Couwelaarlei 103 bus 21, B-1200 Deurne/Antwerp; 4 issues for US\$ 13.00, add \$3.00 for airmail, no personal checks accepted). One subscription is available from SAFCH \$10.00. #78 Summer 90 (32 pages) "70th Anniversary of 'Mephisto'" 9 pages including 2 color photos, 6 b&w photos, and 1/72 & 1/48 scale drawings of Mirage 5 'BR-15' in commemorative colors. (Can a DACO decal sheet be far behind?) "Concise History of Belgian Military Aviation 1918-39" 3 pages including 5 tables (Production SABCA 1922-31; Foreign Aircraft 1919-27; Order of Battle 1921, 1929, & 1/11/39).

BRAZIL

EM ESCALA (IPMS Brazil, Rua Arquias Cordeiro, 316 S/502, CEP 20770, Meier, RJ. Subscription is \$7.00, but they prefer kits or accessories. Send to Antonio Pereira Linhares at the above address.) 2/90 (24 pages) "Brazilian AF Viscount" 1/2-page side-view drawing.

CANADA

RANDOM THOUGHTS (IPMS Canada, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for US \$16.00 in US \$18.00 elsewhere). 21/1 (24 pages) This issue contains a large decal sheet with markings for a late-WWII Canadian C-47 in both 1/48 and 1/72 scale. The sheet also

contains markings for a Canadian jeep and for Canadian modern field vehicles. The National Director explains that this sheet "is going out free to all current members of IPMS Canada. It will not be available in back issues. It will not be available in any issues of RT which are sold commercially at hobby shops or book distributors. There are no extra sheets, so none will be for sale. This is one of the advantages of IPMS Canada membership." Articles in this issue include "IPMS Canada Decals Sheet Instructions and Information" 5 pages including 6 photos and a page of drawings of details. "The \$9.95 Vacuum Forming Machine" 6 pages including construction diagrams. "CT114 Tutor Update" with 4 photos.

ENGLAND

MAGAZINE (Neil Robertson, 16 Green St., Greasbrough, Rotherham, South Yorkshire, S61 4EF, 6 issues for £12.00. US subscription agent: Wise Owl Publications, 4314 West 238th St., Torrance, CA 90505; \$22.00)

5/90 (36 pages) "RAF Lightning in 1/72 Scale" 5 pages kit report including 6 photos and a page sketches. "The Hawker Hurricane" 3 pages describing the different versions. "The Battle of Britain in 1/72 Scale" 5 pages including kits reviews and 17 side-view drawings. "Arctic Harriers & Jaguars" 2 pages including 6 photos and drawing of color scheme for "whitewashed" Jaguar. "Flying Nightmares" 2 pages including 4 side-view drawings of USN PBJs. "Tengah Tigers" 2 pages including 4-view drawing of Singapore F-5E in wrap-around camouflage. "The Israeli Air Force in Decal" a 4-page of Almark's IAF squadron badge and stencil sheet including 5 photos.

PLASTIC KIT CONSTRUCTOR (PAMAG (Publications) Ltd., Unit 308, J.C. Albyn Complex, Burton Rd., Sheffield S3 8BZ; 4 issues £ 17. In USA: J.J. Daileda, 4314 West 238th St., Torrance, CA 90505; 4 issues \$18.00).

#25 (28 pages) "Mid-Engined Mustang?" 2 pages on modeling the Rolls-Royce project. Lots of kit reviews.

FINLAND

MALLARI (IPMS Finland, PL 798, 00101 Helsinki 10; 6 issues \$20.00, add \$1.00 for airmail and \$1.50 for cashing personal check).

1/90 #75 (16 pages) "Finnish BMP-1" 6 pages including 11 photos.

2/90 #76 (16 pages) "Finnish BMP-2" 7 pages including 15 photos and a drawing of the color scheme.

FRANCE

LA VITRINE DU MAQUETTISTE (IPMS France, PB 149, 75961 Paris, Cedex 20, PB 149, 75961 Paris Cedex 20; 4 issues 150 FF).

#39 (44 pages) "C-135F Camouflage" 9 pages including 19 photos and 2 pages of drawings. "Sikorsky R-4" 4 pages including 1/72-scale drawings, 3 photos, and a pages of sketches. "Lippisch LP 12" 2 pages including 1/72- and 1/48-scale drawings. "Sukhoi Su-25 Frogfoot" 4 pages with 17 photos.

"TRUCSETASTUCES" #1 (32 pages): Devoted to modeling modeling techniques (modeling water, weathering with pastels, zimmerit, etc.), this new series is to the same high quality as VdM. My French is not good enough to tell if this is a supple-

ment to Vitrine du Maquettiste or a replacement for it. Perhaps, one of our French members can tell us.

GERMANY

MITTEILUNGEN (IPMS Germany, Bergengruenstrass 5-7, D-1000 Berlin 38; 12 issues DM 60.00 Europe, DM 65.00 USA, DM 70.00 Japan, DM 75.00 Australia).

6/90 (28 pages) "Flugzeuge der Bundeswehr" 4-page table of of aircraft types used by the West German Air Force.

7/90 (28 pages) "Die Kroatische Luftwaffe" 4 pages including 2 photos (Bu-131 & SM-79) and tables of aircraft used by the Croatian AF during WWII.

8/90 (28 pages) "Die Dornier Do 17 und ihre Folgemuster in verschiedenen Luftwaffen" 2 pages including one photo (Romanian Do 17) and table listing the Do-17 types used by 10 counties. Photos of Romanian FW-44 and FW-190A-8.

GREECE

NEA (IPMS-Greece, PO Box 79167, 175 05 Amfithea, Athens)

3/90 (16 pages) "Royal Hellenic Air Force in 1940" 5 pages including 2 photos (PZL P-24) and 5 drawings of camouflage schemes (Breguet XIX, Bloch MB-151, Avro Anson, PZL P-24G, & Avro 626). "Greck Sopwith Camels" 2 pages with drawings of Camels used in the post-WWI campaign in Asia Minor.

ITALY

AEROFAN (Giorgio Apostolo, via Ampere 49, 20131 Milano; 4 issues L 40.000).

#54 (48 pages) "The Italian Giant Bombers" 16 pages including 28 photos, 4 sketches, and 2 tables of Ca-79, Ca-90, Ca-95, CC.20, & Fiat BRG. "Grumman Albatross in Italian Service" 9 page including 8 photos and 10 sketches. "Italian Aircraft in Paraguay" 6 pages including 22 photos (SAV 5, SAV 10, SAML S1, Macchi L 3, Breda 15, SM S-52, SM S-59bis, Cant 10, Fiat CR-20bis, Macchi M-18AR, Breda 44, Fiat CR-32, Breda 25, Caproni AP-1, Caproni 309, & EMB-326). "Canard SS4" 6 pages including 6 photos, 3 sketches, and 1/72-scale drawing.

IL NOTIZIARIO (IPMS Italy, CP 182, 41100 Modena Ferrovia; 4 issues 24,000 Italian Lira in Europe or \$18.00 overseas).

2/90 (32 pages) "Mikoyan MiG-21" 7 pages including 4 photos (Polish & Czech), 6 side-view drawings (USSR & Egyptian), and sketches of instrument panel and a Polish unit (Poznan?) insignia. FW-190: Zwei einzige Sondermustern" 4 pages including 1/72-scale drawings and 3 side-view drawings (2 German 2-seaters & one Russian F-8/M-82). "Hi-Viz" 3 pages with 3-view drawings of colorful Italian F-104S & G-91.

JP-4 (JP-4, CP 1550, 50100 Firenze; L 27.000 Europe, L 30.000 elsewhere).

9/90 200th Issue Special (144 pages) Entire issue devoted to Italian aviation industry.

10/90 (98 pages) Color photos: Jordan F-5B, Peru Mirage 2000, & Romania MiG-29 (w/roundels). "In the Footsteps of Don Quixote" 6 pages including 7 color photos of Spanish Mirage F.1. "From the Training Fields to the Battlefields" 8 pages including 12 photos of Spanish Ha-220.

11/90 (98 pages) Color photos: Swedish Sk35C &

J35J and Indian Il-76MD. "Il Mondo contro Saddam" 9 pages including 14 color photos. "Il Cobra di Pugachev" 7 pages including 9 color photos, small 3-view drawing, and cutaway drawings of Su-27. "Ricordo di una Grande Aviazione" 7 pages including 12 color photos of East German aircraft (MiG-29, MiG-21, MiG-23, Su-22, An-26, L-39, & Mi-8).

POLAND

AERO TECHNIKA LOTNICZA (ASR. POCZT. 8, 00-930 WARSZAWA 71)

5/90 (44 pages) "A-10 Thunderbolt II" 14 pages including 16 photos, 4 pages of 1/72-scale drawings, a 2-page cutaway drawing, a color cover painting, and 5 color side-view drawings. "Air Forces of the World: RAF" 4 pages including order-of-battle and 10 color side-view drawings. "Sketch page: Junkers F-13" one page of details from 1929 magazine. "SVA-5" one page with 1/72-scale drawings of SVA-5 in Polish markings. "Ewakuacja do Rumunii" (Who said you couldn't read Polish?) 3 pages including table and 10 photos. 6/90 (44 pages) "Bf-109G" 13 pages including 9 photos, 3 pages of 1/72-scale drawings showing variants, a page of sketches of details, and a 2-page cutaway drawing. "Air Forces of the World: USMC" 4 pages including order-of-battle and 6 color side-view drawings. "MS 30E-1" one page with 1/72-scale drawings of MS-30 in Polish markings. "Sketch Page: Il-28" "Haganah" 4 pages with 4 photos and 5 side-view drawings (Israeli Avia S-199 & Spitfire IX; Egyptian Spitfire XI & V; & Syrian T-6). "Polish Samoloty w Bulgarii 1937-1945 (Part I)" 2 pages including 4 photos. "P.11c ppor. Dudwala" one page including 4 photos. "Registration 1933" one page with table of SP-AJA to -AKZ. [Editor's note: The Bf-109G and Haganah articles were written by SAFCH members Janusz Ledwoch and Pawel Przmusiala. This issue is a milestone for magazines from Poland; the covers are now glossy paper allowing for better reproduction of the color photos. However, I do miss the color side-view drawings on the back cover.]

ROMANIA

MODELISM TEHNUM (Rompresfilatelia, PO Box 12-201, Bucuresti, Calea Grivitei 64-66, ROMANIA; one year - 4 issues - \$10.00.)

3-4/90 (48 pages) "Aces of the Romanian AF in WWII" 3 pages including 12 photos. "BAKU: Last of the Kiev Antisubmarine Cruisers" 6 pages in-

cluding 6 photos, scale drawing of BAKU, 1/100-scale drawing of Yak-38, and cutaway drawing of Ka-32 Helix. "Bristol Blenheim in Romanian Service 1941-45" 2 pages of text, 4 color side-view drawings, 1/32-scale drawing, and a gigantic (36" x 28") color poster. "One of the first Successful Helicopters: FA-223" 4 pages including 16 photos and 1/82-scale drawings of Fa-223, Fa-225, & SE-3000. "Emblems of the Romanian AF in WWI" one page including 12 color drawings.

SWITZERLAND

virus plasticus (IPMS-Switzerland, c/o Mathias Weichelt, Zelgstrass 27, 3027 Bern; 4 issues 35 SFr)

2/90 (32 pages) "Scottish Aviation Twin Pioneer" 4 pages including 3 photos and 2 side-view drawings of Swiss civil machines.

USA

WWI AERO (15 Crescent Rd., Poughkeepsie, NY 12601; 4 issues \$20.00).

#130 (124 pages) "Augustus M. Herring" 18 pages including 25 photos and numerous drawings. "Burgess Pt VI" 12 pages including 17 photos and drawings of the Twin Hydo and the Model K and M Flying Boats. "Rossiya B" 2 pages including 2 photos of "Russia's first production aircraft". "3-View from Photographs" a 13-page seminar of developing accurate 3-view drawings from photographs. "Drawings" 3 pages of drawings Macchi-Nieuport 11 & M-5. "Museums" 3 pages with 9 photos of aircraft lost from the USAF Museum. "Archiv" 2 pages of drawings of German exhaust manifolds. "World War I Aviation Films" 8 fascinating pages including 8 photos.

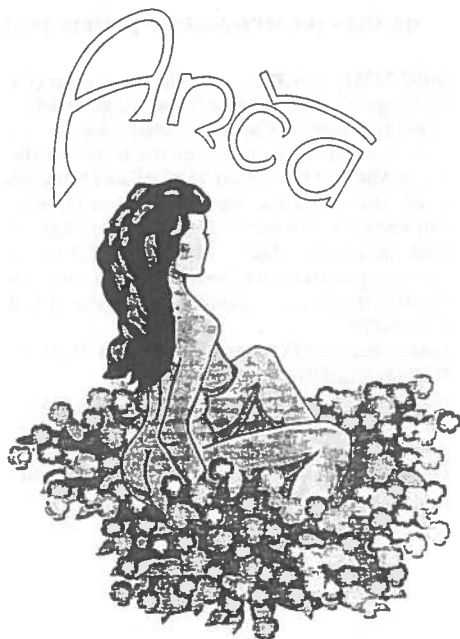
PRI-FLY (IPMS Washington DC, c/o Carol Fleckenstein, 13816 Choptank Ct., Centreville, VA 22020; 4 issues \$7.00 for US, \$8.00 all others).

#76 (16 pages) "Aviation in the Spanish Civil War" 3 page review of literature with 21 side-view drawings reproduced from FLIGHT PLAN and SAFO. (Thanks for including SAFO's address. I wish more publications would do this.) "Fairey Flycatcher" a '2-page research, reference, and kit survey'.

PACIFIC MODELEER (USA \$7.00, others \$8.00 from IPMS-Hawaii, PO Box 1941, Pearl City, HI. #30 (24 pages) "Yakkety Yak!" an 11-page kit correction article including 3 photos, 3 side-view draw-

ings, and 4 pages of scale drawings reproduced from the Polish magazine Klub 1:72. "Sun yet Young and Rosamonde" 4 pages including 4 photos and scale drawings of Rosamonde, the first aircraft designed and built in China.

#31 (24 pages) "Frogfoot, the Commie Warthog" a 12-page review of the 1/48-scale Monogram kit including 8 photos, 4 pages of 1/72-scale drawings, 3 pages of camouflage schemes (Czech, Soviet, & Iraqi) all reproduced from the Czech magazine Zlinek. The Czech aircraft is '6019' with a shark mouth, unit insignia (prancing horse), and a "tastefully nude pin-up lady" individual insignia. Since the author was "never one to resist a sharkmouth", he did the decals for '6019' himself.



[Editor's note: This aircraft is apparently the one featured on a new decals sheet from Czechoslovakia. The Iraqi Frogfoot differs from the one shown in SAFO #56 in that it carries a two-color top camouflage scheme (brown & tan) instead of the sand, brown, and green scheme shown in SAFO.]

-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-wants&disposals-

"Aircraft recently received by the Phillipine AF are the McDonnell-Douglas MD-520 helicopters and SIAI S-211 jet trainers. The PAF also received 4 ex-Taiwan F-5A and it is rumored F-5E and F-5F will follow. Also, we may finally get some OV-10 Broncos through the US military assistance program.

"I am looking for detailed plans of the following aircraft which I want to include in the update of my monograph of the Phillipine Air Force (hopefully to be published in 1991): Britten-Norman Defender, GAF Nomad BN-22, Fairchild C-123, Douglas O-46, Aero Commander 520 (YL-26), SIAI S-211, MDD MD-520, Fokker F-27 Friendship, Stinson SR-9 Reliant, Keystone B-3A, & Stearman 76D.

"I will be sending you an article on the Phillipine Army Air Corps in WWII. I found information on a Keystone B-3A bomber in PAAC markings, but

still looking photos or information for the Beechcraft D-18, Boeing P-12, and Douglas O-46 in PAAC markings. Can any of our readers help?" Bert Anido (SAFCH #4), PO Box 1406 MCC, Makati 1299, Philippines.

"I operate a sales service in quality original Kodachrome slides for collectors and historians. Three lists are available: Military, Airline, and Business. Prices are \$1.00 per slide (with a minimum order of 10 slides), plus \$1.00 postage within the US or \$2.00 postage outside the US.

"Slides are also available on an approval basis. For a cash deposit of \$20.00, you will receive slides in the category of your choice. Just keep the slides you want and return the remaining slides within 10 days. You may draw on your account or send payment, but the lower your account becomes, the smaller the number of slides sent. Once your account goes

below \$10.00, it will be terminated and the remaining money refunded.

"We need contributing photographers who have the ability to take quality slides of aircraft, particularly those of the smaller air forces. To apply, send a few samples of your work and you'll be contacted with further information."

Werner Hartman (SAFCH #872), 4793 Le Roy St., San Bernardino, CA 92404.

"I am interested in locating some of the earlier Polish Profiles as follows: #1 T-34, #3 PZL-24, #5 PZL-37, #10 Il-2, #12 Pt-76, #15 T-55, & #17 MiG-15."

Geoffrey Schroeder (SAFCH #591), 4555 Fulton Ave. #109, Sherman Oaks, CA 91423.

"I am looking for persons interested in exchanging Eastern European magazines subscriptions, books, decals, and kits for subscriptions to the following

Sal Morale (SAFCH #1009), 235 Elizabeth St.,

[Editor's note: A copy for the SAFCH files would also be appreciated.]

"I need help on the interior cockpit colors for the Dewoitine D-520 circa 1940 as well as information on wheel wells. Also, I need a Lewis gun and Scarff ring in 1/48 scale for my conversion of Aurora's Douglas O2C into a Chinese light bomber from 1932. Perhaps someone wants to trade parts." Ed Cserny (SAFCH #964), c/o Daniel Birdsall Co., State Building, 270 Broadway, New York, NY 10007.

SMALL AIR FORCE LARKS

Hubert Cance with Bill Devins

This Update will serve two purposes: it will add some additional Alouette III color schemes to countries that were introduced in SAFO #46, and it will allow some of Hubert Cance's excellent artwork to see the light of day. Hubert lives in France, and is a self-proclaimed helicopter fanatic. He has organized and provided much of his research to this project, and has drawn up some 34 original profiles.

These first fifteen drawings add to the pictorial coverage of Larks of seven nations first featured in SAFO #46. They feature a profile of an Alouette III derivative manufactured in South Africa. The artwork and research are almost entirely Hubert's. I have put his descriptions into narrative form, and have added a few notes of my own in places.

(22) PAKISTAN

This SA 316B of the PAF's #84 Air Rescue Squadron, based at Masroor in November 1988, features the unit's badge, a golden dolphin on a light blue circular field, on the cabin doors. Large mid-green/white national insignia are flown from the fuselage, while the square mid-green fin flash with the white crescent moon and star appears on the tail boom. Serial number "5412" on the fuselage is yellow, as are the tail "DANGER" warnings and arrows on the fins. The tailskid is yellow as well, with a red band at its foot; tail rotor is banded in red and yellow. The airframe is olive drab overall, with a natural metal panel beneath the engine. Note the additional beacon under the boom, the hoist, modified air filter, antenna below the cabin, and the small light grey antenna with a yellow stripe on the lower port side of the tailboom. Reference: Air Action #4

(23) INDIA

This overall olive drab machine is an HAL-built "Chetak" of the Indian Air Force's 112 Sqn. Tail rotor and guard are in the familiar red and yellow, while the panel below the exhaust pipe is left in natural metal. The Indian orange (outer)/white/green roundel appears on the rear fuselage, while the green (front)/white/orange vertical tricolor flies from the fin outer sides. A large black code "Z1413" is painted on the tailboom. Reference: Warplane #76, pg 1513

(24) SOUTH AFRICA

An SA 3160 Alouette III of the SAAF's 16 Sqn, based at Port Elizabeth, this machine is also used by the 87 AFS (Advanced Flying School) at Yserplaats. Camouflage is a dark earth/dark green "wrap-around" with the tail rotor guard in dark earth. A small black "629" appears under the intake filter. Tail rotor is striped in red and yellow; the white-outlined red warning rectangle on the tail fin features the words "DANGER" and "GEVAAR" above and below a white arrow respectively. National insignia on the fuselage sides is a medium-blue five-pointed star in the shape of a fortress, outlined in white and sporting an orange-yellow springbok in its center. Note the infra-red suppressor on the exhaust pipe, the angled wire-cutting blade just ahead of the rotor pylon, the support and handle aerials on the nose, and the large intake filters common to SAAF Alouettes. Reference: Warplane #76, pp 1508-1512, 1515

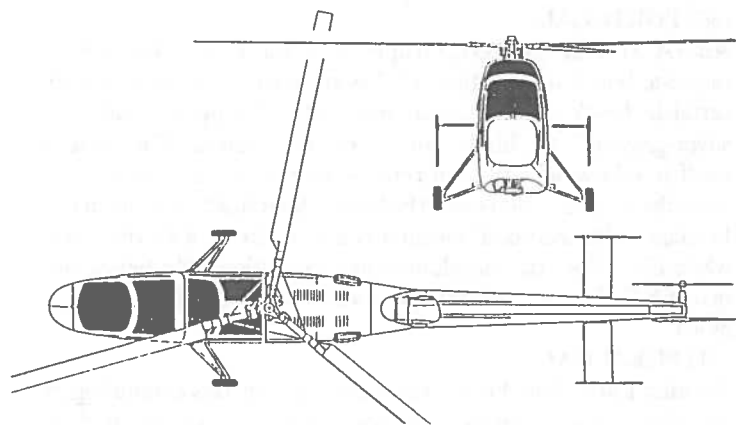
(25) SOUTH AFRICA

Another SAAF SA 3160 sometimes used by the 87 AFS, this Lark is assigned to 17 Sqn at Zwartkop. Camouflage and mark-

ings are similar to (24) above. This machine seems to be outfitted more for rescue than combat, as it carries the hoist on the port side, with additional lifting gear beneath the fuselage. No filters or exhaust suppressors are fitted, and the self-braced tail rotor guard is finished in grey. Black code under the engine is "639". Additional markings on the window of the back door appear as a yellow rectangle, and a white "J", possibly in masking tape. Reference: Air International, Vol 31 No 1, July 1986, pg 39

(26) SOUTH AFRICA - ATLAS XH-1 ALPHA

Using the dynamics system of a standard Alouette III, the Atlas Aircraft Division of Armscor, the South African armament corporation, evolved a light attack helicopter. This prototype, designated XH-1 Alpha, features the stepped tandem seating and "chin" turret armament common to this class of helicopter. The weapon shown here is a locally-manufactured GA1 20mm gun, although other armament can be carried by the turret mount, which is slaved to the gunner's helmet sight. A load-carrying beam can apparently be fitted through the fuselage for external stores. The Alpha's maiden flight was on 3 Feb 1985, but it is doubtful that any production was undertaken. Color scheme is standard SAAF dark green/dark earth with red/yellow striped tail rotor and a day-glo orange nose cap. No national markings are carried, only a red rectangle on the endplate fins, outlined in white and bearing a white arrow under the white word "DANGER". Exposed engine parts are natural metal. Various antennae, such as the white blade, are fitted to the lower fuselage. Reference: Air International, Vol 30 No 6, Jun 1986, pg 299; Warplanes #116



(27) MALAYSIA

Yet another variation on the Malaysian Lark, this olive drab SA 3160 features extensive orange-red day-glo panelling on the cabin doors, sides, roof, and tailboom. "FM 1086" is white, while the "DANGER" markings and arrow on the fins are red. A small yellow panel tops the fin, and the yellow tailskid protects a red/yellow rotor. Note the black hoist and the natural metal panel below the engine. The large square Malaysian national insignia, a yellow sun on a light blue field surrounded by a thick mid-blue outline was carried on this machine when it was photographed. The cabin door and roof glazing is tinted blue. Reference: Air Fan #68, June 1984

(28) IRELAND

A very light grey (possibly silver)* Alouette III, black "197" serves with the Irish Air Corps' No 1 Support Wing at Baldonnell. Black type designation "SA 316B" and serial number "1194" are stencilled on the front cockpit air intake. The panel immediately below is black-grey, with an "orange crop"-type antenna in a box-like housing beneath. Script "Alouette III" is painted on this housing, with the black number "197" offset on the lower nose (see scrap-view). Note also the black rod and white blade antennae under the nose, the hoist and grab bar, and the black/yellow striped tailskid. Tail rotor is red & yellow, and warning arrow and "DANGER" on the fins is yellow. National insignia** is green/white/orange with a like-colored Irish flag (green forward) on the boom. Light-grey (or silver) flotation bags are carried in the usual locations. Reference: Warplane #76, pg 1508

****NOTE:** Hubert had illustrated this machine without the IAC roundel, which is not visible in the photograph. Due to the camera angle, it would not be visible even if it were there. All other Irish Alouettes I have seen pictured carry this marking, so I have added it to the drawing and description.

(29) IRELAND

Another light-grey (or silver)* IAC Lark, 211 is very similar to 197 above, without most of the electronic and rescue accessories. The yellow tailskid protects a red and yellow-banded tail rotor. Note the black handhold/step locator marks. National insignia and warning markings are as on 197 above. Reference: Warplane #76, pg 1513

***NOTE:** Study of color photos of these Irish machines still leaves me in doubt as to their actual color. In SAFO #46 I interpreted it as silver, but the photo in Warplane #76 looks like it could be light grey, as Hubert has postulated. I still lean toward the silver (paint), but you take your chances until some more definitive information turns up. - Bill

(30) PORTUGAL

An SA 3160 of Esq 551, Grupo 61 of the Forca Aerea Portuguesa, based at Montijo, 9303 is olive drab all over with its serial in black. Landing gear and tailskid support struts are silver-grey, as is the blade antenna on the tailboom. The tailskid itself is yellow, and the tail rotor is striped in red and yellow. Note the large air filters and the lack of handhold cut-outs in the fuselage sides. National insignia is a red "Cross of Christ" on a white disc. Note the supplementary navigation light below the insignia. Reference: Air International, Vol 2 No 2, Feb 1972, pp 59-61

(31) PORTUGAL

Another Lark of the Forca Aerea Portuguesa, this camouflaged machine of BA 3 is based at Tancos. Colors are olive green, dark green and dark earth above with light grey undersurfaces. The serial number "9312" appears in black on the lower fuselage and the top of the fin. A yellow warning band on the boom carries a black words "PERIGO" and "DANGER" above, and "KEEP AWAY" below, a red arrow. A red (forward) and green flag flies from the fin, along with red/white Portuguese national insignia on the fuselage. The long tailskid is yellow, and the tail rotor is yellow with red tips only. Note the yellow step/handhold markings, the yellow arrows on the cabin door and the black rectangle above the serial number which outlines the armament mounting. This SA 3160 is equipped with the tripod nose FM homing antenna, a small light grey blade aerial with a white line under the port nose, a white blade beneath the cabin, a belly antenna,

a sword aerial on the boom, and a lower boom beacon. Reference: Air Fan #105, Aug 1987

(32) THE NETHERLANDS

This dark blue Alouette wears the last color scheme of the 300 SAR Squadron of the Dutch AF. Orange-red day-glo panels liven up the fuselage sides, lower nose, fins, tailskid and main rotor blade/hub junctions. The day-glo on the upper boom rear is fading. A black blade antenna with a white band and the black hoist are carried on the cabin roof; black step markings show the way up. Yagi aerials sprout from either side of the nose glazing, with various whip antennae on the boom and roof. An unpainted panel is under the engine. A lower nose mirror, grab bar, and dark blue flotation bags are carried. The code "H-20" and "RESCUE" are white, while the Dutch national insignia is a roundel radially divided into red, white and blue thirds surrounding an orange central dot. Fin warnings are black. Reference: Flight Logs #43, Apr 1988

(33) THE NETHERLANDS

H-75 is colored, marked and equipped very much like H-20 above. Exceptions include lack of search radar and rescue wording, and white flotation bags. The top of the stabilizer is dark blue. Scrap-view shows the fins of H-20 at a time when the stab top was day-glo and the white code "H-20" appeared in a dark blue oval. Reference: MACH 1, Air Forces of the World, Atlas 1981

(34) THE NETHERLANDS

An overall olive drab Lark of 292 Sqn based at Soesterberg, A-218 is in Army colors; in fact, all Dutch Alouettes are used by the Air Force but are Army property. The code is white, and "DANGER" with warning arrow on the fins is yellow, along with the tailskid. The tail rotor is red and yellow; note the whip antenna and mounting attached to the tailskid. Another whip aerial and a black handle antenna are on the cabin roof, with white blades above and below the fuselage. Hoist gear is carried beneath the body, and the unpainted panel appears below the engine. Standard Dutch insignia are flown, along with the Squadron badge, a yellow-trimmed green butterfly on a white disk. Reference: Warplane #76, pg 1514

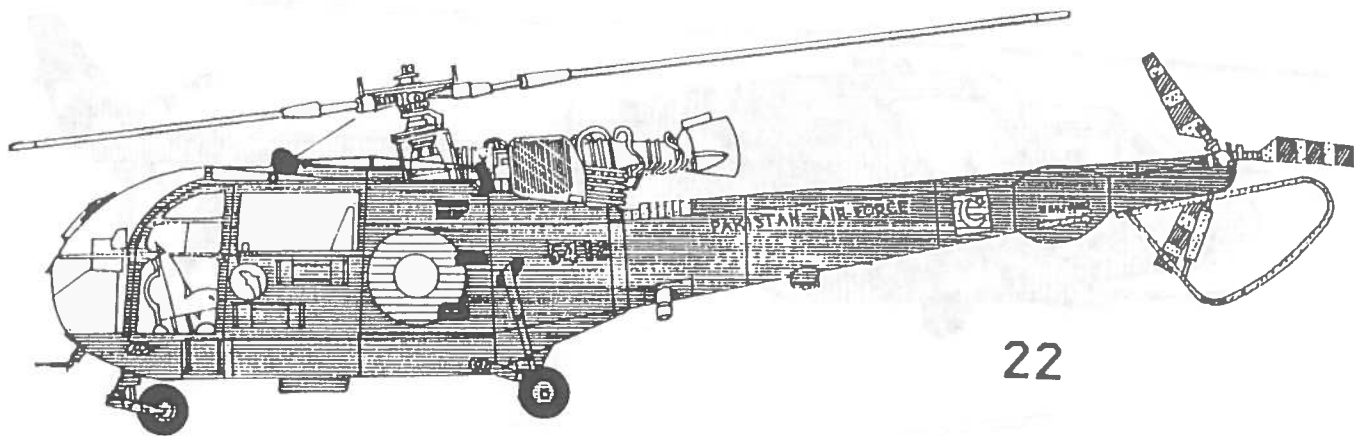
(35) THE NETHERLANDS

Camouflaged in an olive drab and dark earth wrap-around scheme, this 298 Sqn machine is based at Soesterberg. This one bears the black code "A-500" on the boom; other like-finished examples include A-260, A-307 and A-535. Blade (grey with white stripe), handle (black) and whip antennae occupy the cabin roof. Note the black step and warning markings, the red/yellow tail rotor and yellow skid. A red dot appears just below the Dutch roundel on this side. Wheel hubs are dark earth. Reference: Flight Logs #43, Apr 1988

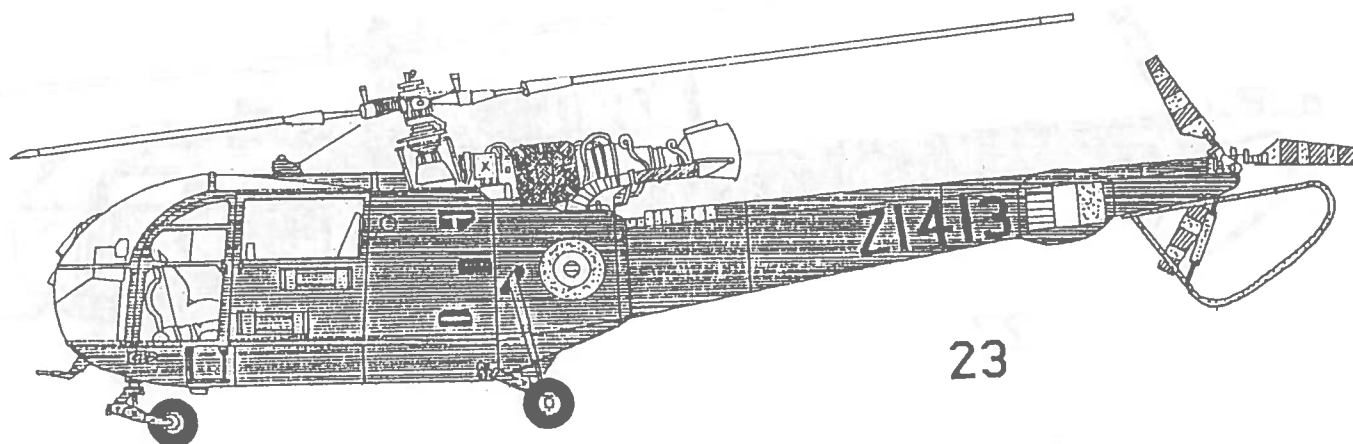
(36) THE NETHERLANDS

Another Army-marked Alouette flown by the Air Force's 298 Sqn, A-528 is camouflaged in low-visibility black and dark green. Code is black, as are the danger markings on the fins, and no national or unit insignia are carried. The usual red/yellow tail rotor is protected by a yellow tailskid; note the whip antenna and its black mounting on the skid. Other black antennae are carried on the cabin roof. Reference: Le Fana de l'Aviation #223, Jun 1988

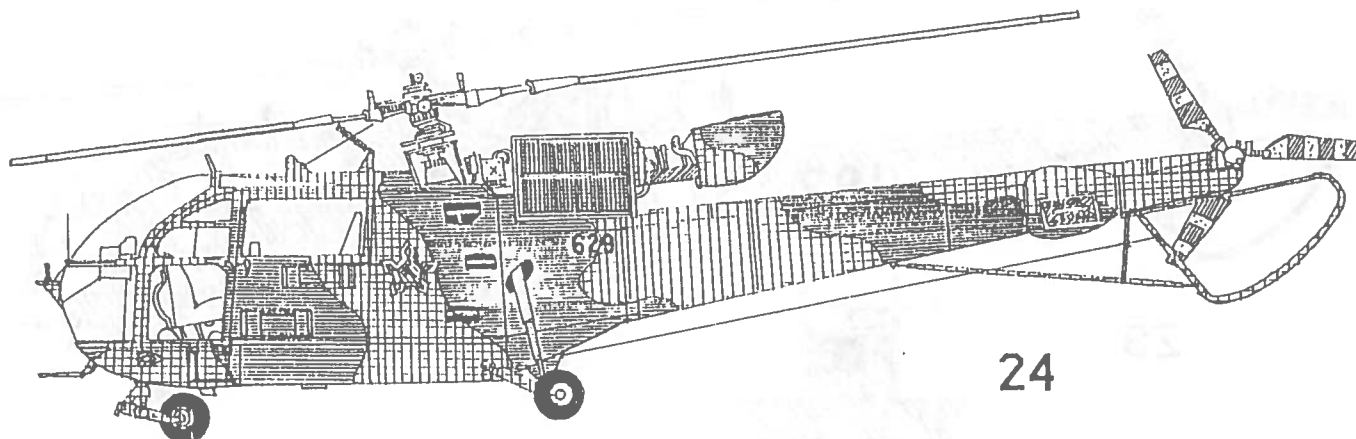
Alouette III Research Project, Bill Devins (SAFCH #557), 107 Troy Hills Rd, Whippany, NJ 07981.



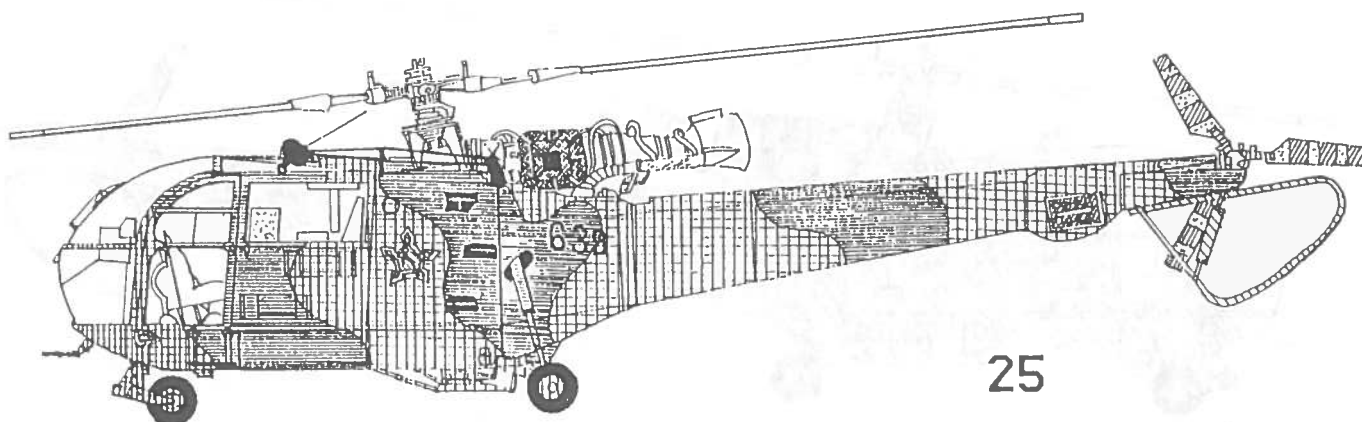
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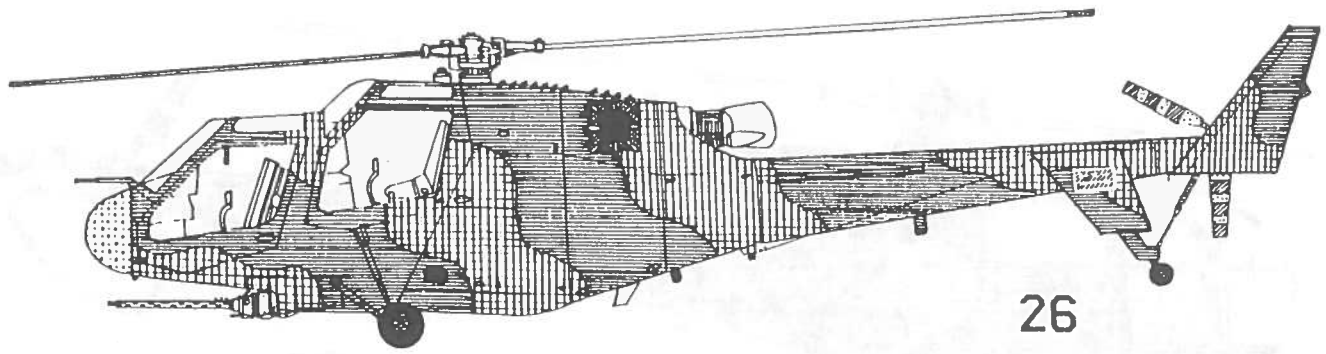
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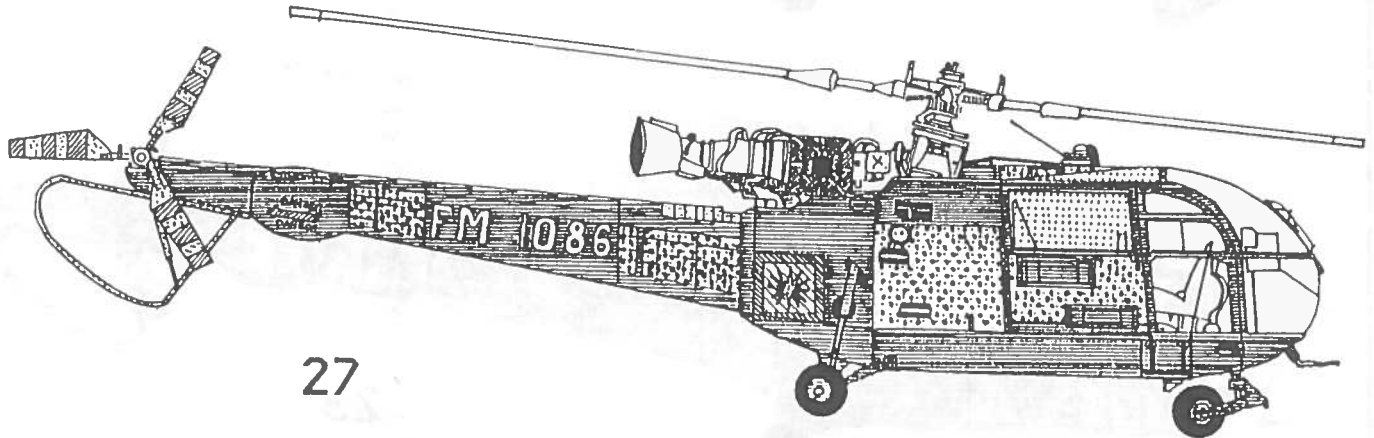
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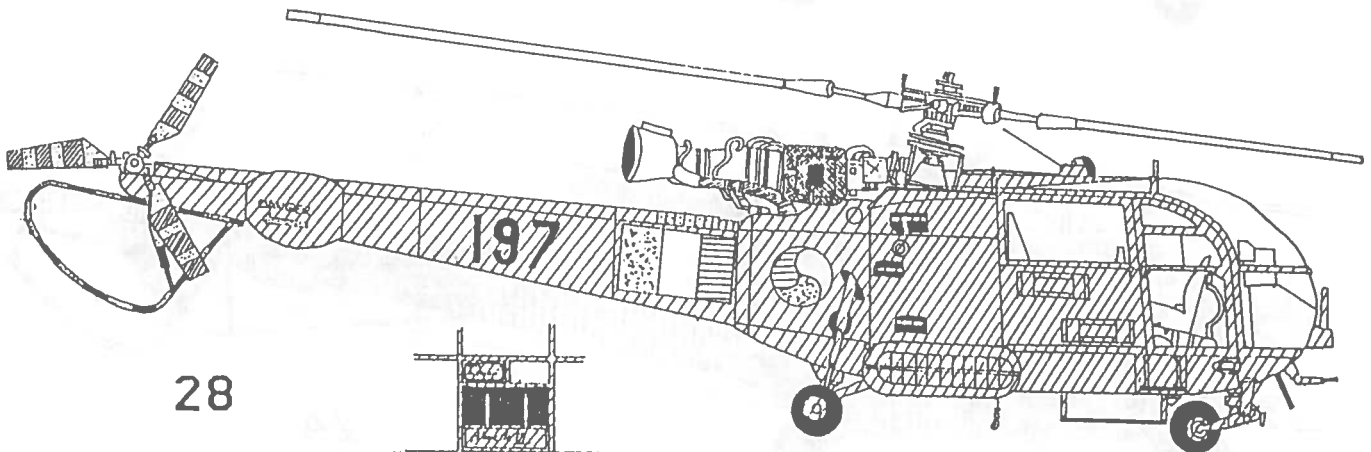
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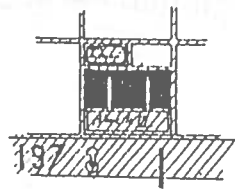
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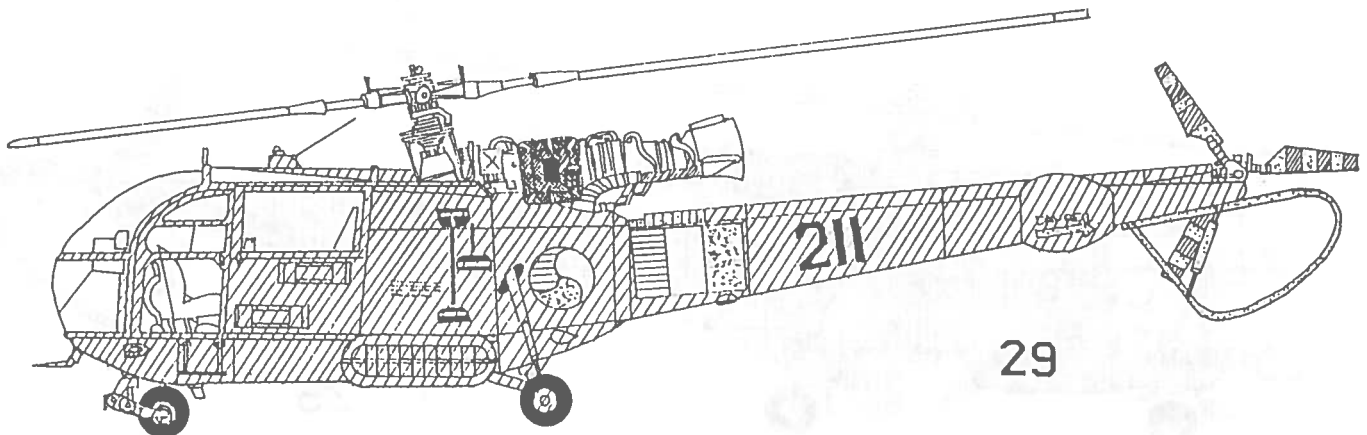
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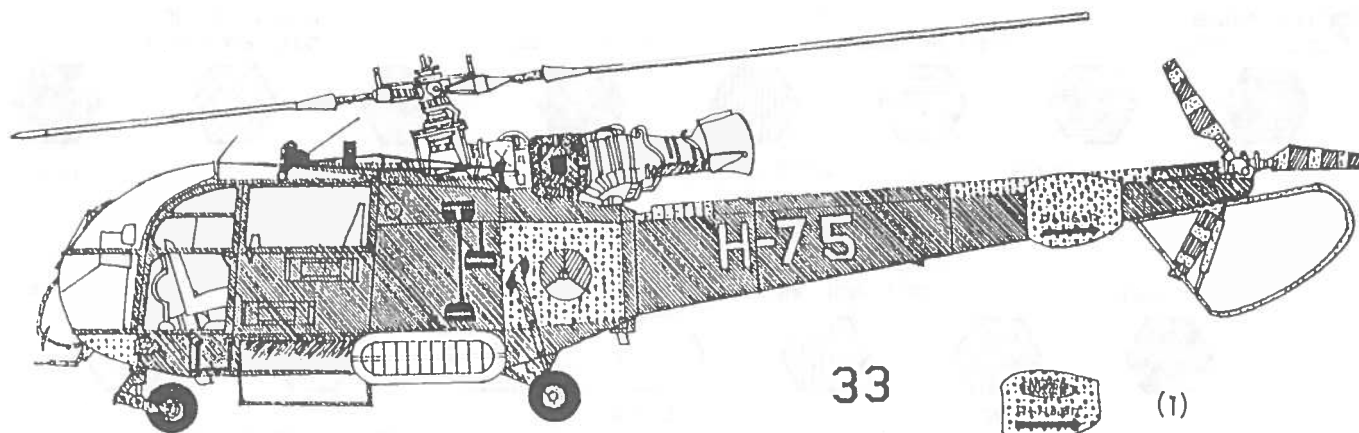
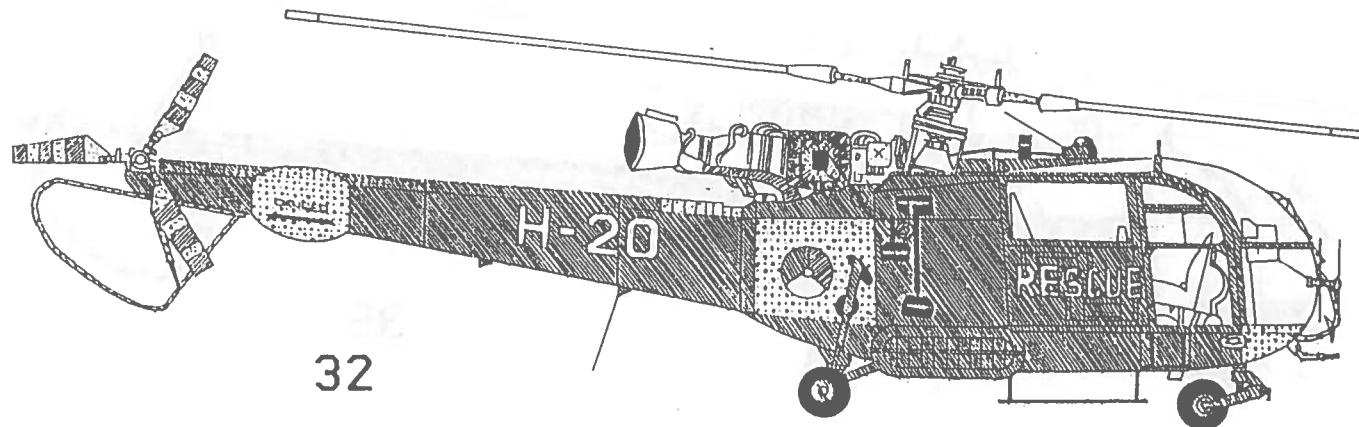
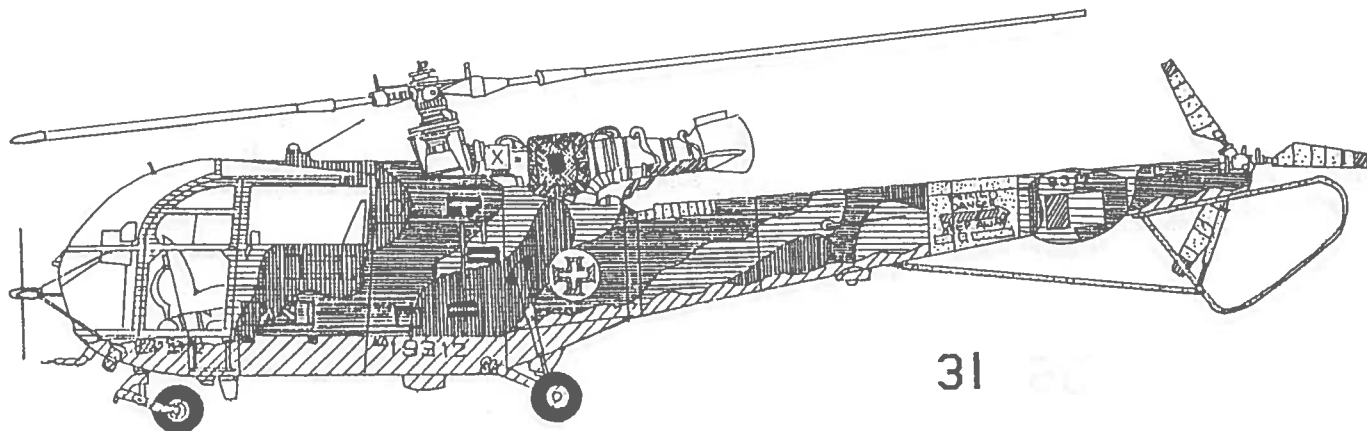
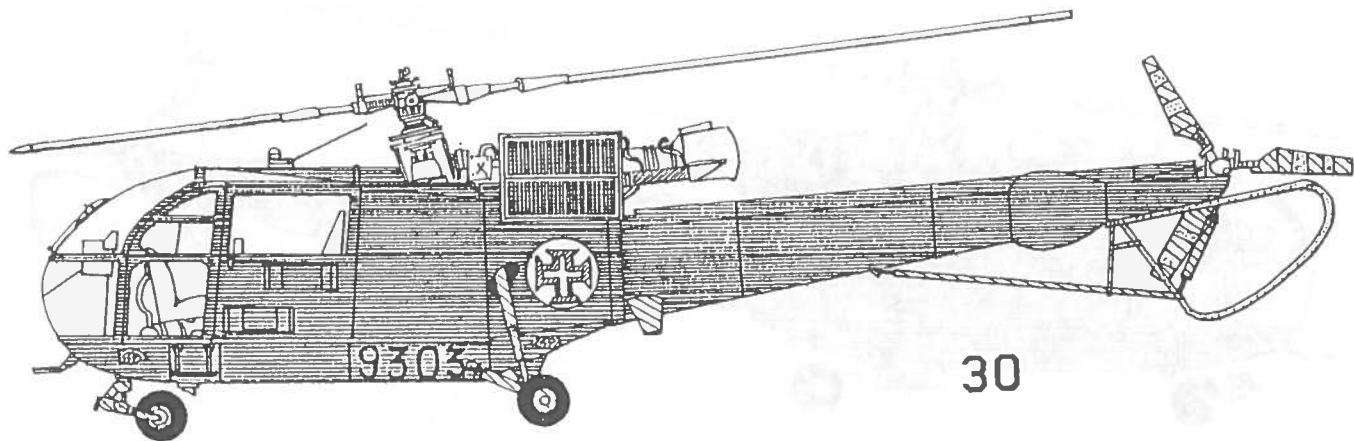
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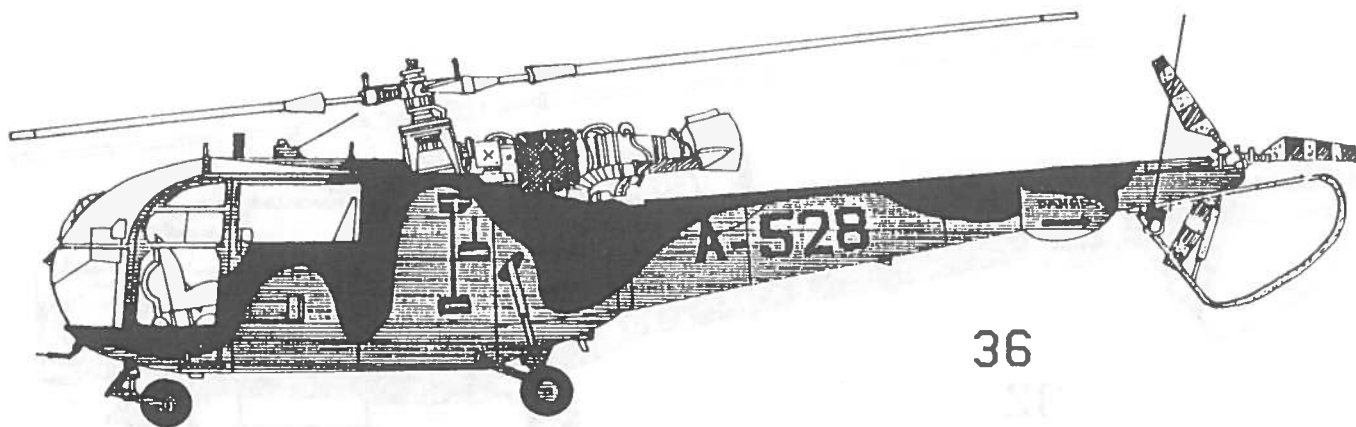
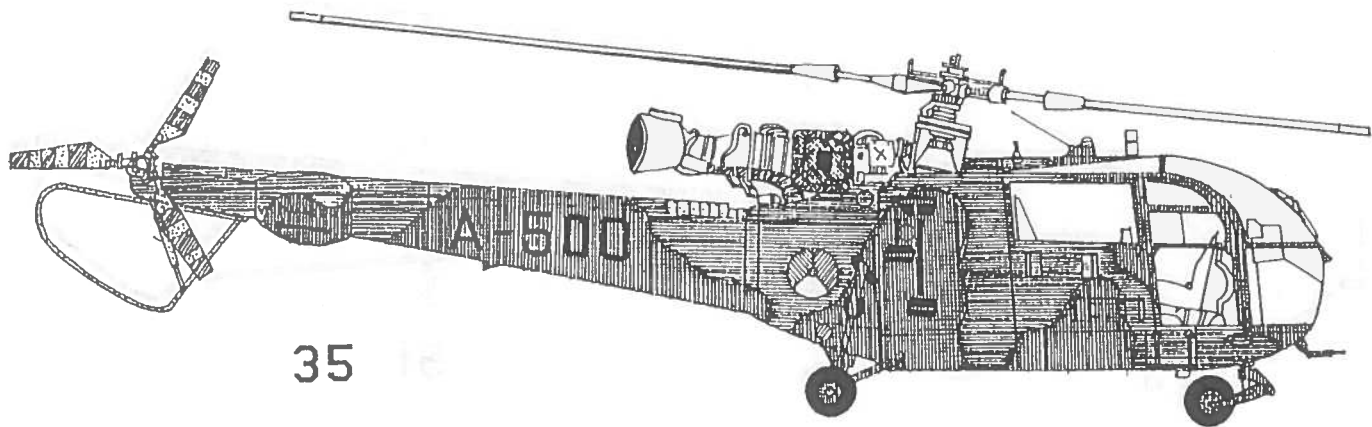
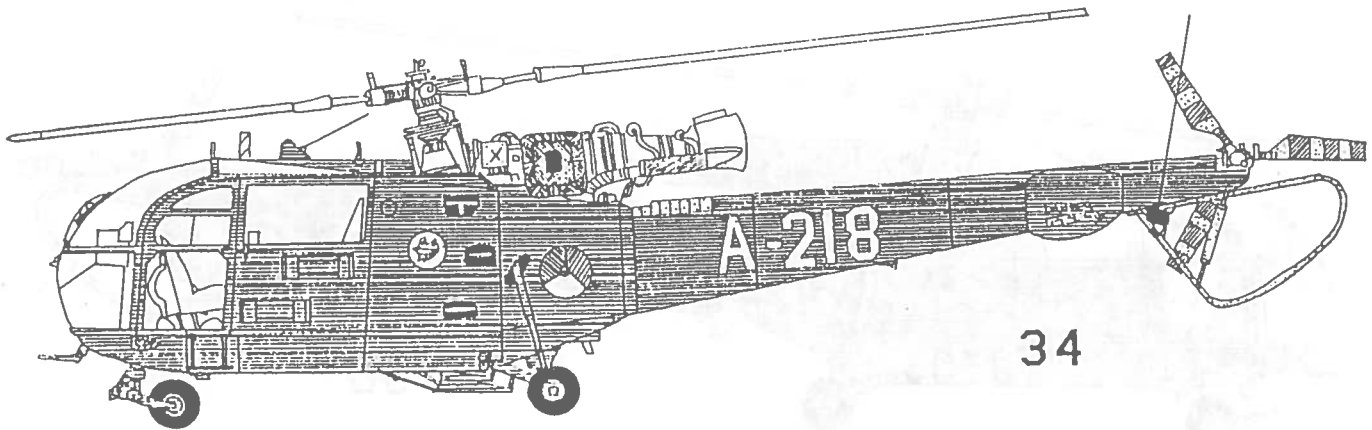


197



29





OLIVE DRAB/
OLIVE GREEN



MEDIUM GREEN



DARK GREEN



DARK EARTH



DARK BLUE



MEDIUM BLUE



LIGHT BLUE/
SILVER GREY



RED

— SEE TEXT FOR VARIATIONS —

DARK GREY



NATURAL METAL



SILVER/
LIGHT GREY



ORANGE



YELLOW



GREEN/BLUE
TINTED GLASS



DAY-GLO
RED/ORANGE



AEROSPATIALE ALOUETTE III

A SAFCH RESEARCH PROJECT: Progress Report #2

Information on the Alouette III continues to come in from all over the world. Alfredo Jurado has provided some photos of Ecuadorian machines, and Vince Klimas and Leif Hellstrom have both sent copies from their files. The question mark next to Australia elicited a massive response from down under; Ley Reynolds, Paul Adams, Charles Cooke and Mick Mirkovic have now set us straight on the antipodal Alouettes. Hubert Cance has not given up, either. He has prepared another eight profiles, including drawings of the IAR 317 Airfox and the Atlas XH-1 Alpha, two attack helicopters based on the Alouette III.

I do appreciate the input we've been getting on this project. I don't have half the time I'd like to spend with it, so progress is sometimes slow. If it seems I've been slow in acknowledging your contributions, I apologize. Be assured that I am indebted to all who have responded, and that sooner or later all of this information will be put to good use.

The revised table now lists 100 potential users in 79 countries. A "?" next to the country means that the

country is mentioned as an Alouette III user in one source, but I have not had further verification. We still need information on Cambodian, Israeli, and Soviet Larks.

The "Type" refers to the specific Alouette III variant(s) utilized by each service. Here, a "?" indicates conflicting information or an assumption on my part [i.e., Venda probably obtained its Larks from the SAAF, so they would be SA.3160's].

The "Data" column catalogs color scheme information in my files. An asterisk (*) means that the information has already been published in SAFO; the appropriate SAFO issue # is in the last column. An "at" sign (@) indicates information currently on file from which a color-annotated profile can be created. A number following the symbol indicates the number of DIFFERENT schemes available.

Once again, all schemes are not assumed to be cataloged - an indicator means we have at least one representative scheme to draw from. Right now I've got about 21 schemes to illustrate, along with about 20 already drawn by Hubert. The unfortunate blank

spaces show areas where we have no color scheme or markings information; these are the places where we need more research.

Hubert wants to continue the Aerospatiale theme with the Alouette III's elegant successor, the SA 341/342 Gazelle. He has already created a SUPERB5-view base drawing. My files are thin on this one, but if you want to continue this Aerospatiale Research Project with the Gazelle, let me know. I have about 20 countries listed as Gazelle users, quite a few of them in the Mid-East, so the color schemes may prove interesting. If you have any information, clarifications, photos, schemes, etc., please contact the AEROSPATIALE SAFCH RESEARCH PROJECT at the address below. Thanks, as always, for the input!

Bill Devins (SAFCH #557), 107 Troy Hills Rd., Whippany, NJ 07981.

Country	Service	Type	SAFO	Country	Service	Type	SAFO
Abu Dhabi	Air Force	SA.316B	#46	Liberia	Army	HAL Chetak	
Algeria		SA.316B/IAR-316B (?)		Libya	Air Force	SA.316B	#46
Angola	Air Force	SA.316B, IAR-316B			Army	SA.316B	
Argentina	Navy	SA.316B		Malagasy Republic	Air Force	SA.316B	
Australia	Air Force	SA.3160		Malawi	Air Wing	SA.316B	
Austria	Army	SA.3160	#46	Malaysia	Air Force	SA.3160	#46
Bangladesh	Defence Force	SA.316B		Malta	Defense Force	SA.316B	
Belgium	Navy	SA.316B		Mexico	Air Force	SA.3160/316B	
	Civil	SA.319B			Navy	SA.319B	
Bophuthatswana	Defense Force	SA.316B		Morocco	Police	SA.316B	
Burkina Faso	Air Force	SA.316B		Mozambique	Air Force	SA.316B	
Burma	Air Force	SA.3160		Nepal	Army	SA.3160, HAL Chetak	
Burundi	Air Arm	SA.316B		Netherlands	Air Force	SA.3160/316B (?)	#46
Cambodia (?)					Army	SA.316B	
Cameroun	Air Force	SA.316B		Nicaragua	Air Force	SA.316B	
Canada	Coast Guard	SA.3160/316B		Nigeria	Air Force	SA.316B	
Chad	Air Force	SA.316B		North Yemen	Air Force	SA.316B	
Chile	Navy	SA.319B		Pakistan	Air Force	SA.3160/316B	#46
Congo	Air Force	SA.3160			Army	SA.316B	
Denmark	Navy	SA.3160	#46		Navy	SA.319B	
Dominican Republic	Air Force	SA.3160/316C (?)		Papua New Guinea	Civil	SA.316B	
Ecuador	Air Force	SA.316B		Peru	Air Force	SA.3160/316B	
	Army	SA.316B			Army	SA.319B	
	Navy	SA.319B			Navy	SA.319B	
El Salvador	Air Force	SA.316B		Portugal	Air Force	SA.3160/316B (?)	#46
Ethiopia	Air Force	SA.3160/316B		Rhodesia	Air Force	SA.3160/316B	#12
France	Air Force	SA.319B		Romania	Air Force	SA.3160, IAR-316B, 317	
	Army	SA.316B		Rwanda	Air Force	SA.316B	
	Navy	SA.316, SA.319B		Saudi Arabia	Air Force	SA.316B	
	Civil	SA.316		Seychelles	Air Force	SA.316B	
Gabon	Air Force	SA.316B, SA.319B		Singapore	Air Def Cmd		#46
Ghana	Air Force	SA.316B		South Africa	Air Force	SA.3160, XH-1 Alpha	#46
Greece	Navy	SA.316B/319B (?)		South Korea			
Guinea	Air Force			Spain	Army	SA.319B	
Guinea Bissau	Air Force	SA.316B			SAR	SA.319B	
Guyana	Defence Force	SA.319B		Switzerland	Air Force	SA.3160/316B	#49
Hong Kong	Aux Air Force	SA.316B			Civil	SA.319B	
India	Air Force	SA.316B, HAL Chetak	#46	Tunisia	Air Force	SA.3160	#46
	Army	HAL Chetak		United Arab Emirates	(see Abu Dhabi)		
	Navy	HAL Chetak	#46	United States	Civil	SA.316	
	Coast Guard	SA.316B		USSR (?)		IAR-316B (?)	
Indonesia	Air Force	SA.316B		Vietnam (Republic)	Air Force		
	Army	SA.316B		Venda	Defense Force	SA.3160 (?)	
	Navy	SA.316B		Venezuela	Air Force	SA.3160/316B (?)	
Iraq	Air Force	SA.316B			Army	SA.316B	
Ireland	Army Air Corp	SA.3160	#46	Yugoslavia	Air Force	SA.316B	#46
Israel (?)				Zaire	Air Force	SA.316B	
Ivory Coast	Air Force	SA.316B		Zambia	Air Force	SA.316B	
Jordan	Air Force	SA.316B/316C	#46	Zimbabwe	Air Force	SA.3160/316B	
Laos	Army						
Lebanon	Air Force	SA.3160/316B					

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"It was very good to see an article on Latvian aircraft in SAFO #56. I was especially interested in the drawings of the KOD-1 for I've been searching for more information on this type for a long time. I hope that in the future we will see an article on Estonian aircraft, especially the POM, PTO, &

PN."

John Jarratt (SAFCH #972), 17 Linsdale Gardens, Gedling, Nottingham. NG4 4GY England.

"Please inform our readers that, for the immediate future, I will be unable to answer their questions on

the RAAF. It seems all my references were taken during a recent robbery. It will be awhile before I can rebuild my files. Please note the new address." Mike Mirkovic (SAFCH #465), 807/180 Goderich St., Perth, W.A. 6000 Australia.

"In your review of the Monograph on the Chilean

With a ban on military aircraft construction in effect in post-war Germany, Prof Dornier set up shop in Spain and designed the STOL Do 25 to a Spanish Air Ministry requirement. On June 27, 1955, a year after the maiden flight of its predecessor, the refined and enlarged Do 27 first took to the air. Possessed of exceptional short-field performance, this clean little general purpose machine soon found a ready market around the world in both military and civilian roles. The HUMA Do 27 is made up of 32 parts molded in the usual soft white plastic, and six cleanly pressed clear pieces. Surface detail is engraved, and is a little heavy in places. Sixteen of the pieces make up the interior, and an optional passenger seat is included for the co-pilot's spot. A tech manual photo, cutaway drawing and instrument panel decal will help you to further outfit this area. The Do 27's cockpit is entered through the windscreen panels, which open "gull-wing" style, hinged at the center. The

Over 2,000 Fw 58's were built by Focke-Wulf (1179), Fieseler (239), Gotha (320) and MIAG (249) in Germany, and under license by GVG in Hungary and the Oficinas do Galeao in Brazil. Major variants included the Fw 58A light transport, the glazed-nosed Fw 58B bombing and gunnery trainer, and the dual-control Fw 58C pilot and radio trainer. Some machines were re-engined with Hirth HM 508's, and a few were fitted with twin floats or skis. A number of special examples were used by

The clear parts are a little foggy and should be polished up with toothpaste or plastic polish. Seven pieces give you a fair start on the interior, and many small details such as external ladders and landing

Bill Devins (SAFCH #557), 107 Troy Hills Rd.,
Whippany, NJ 07981.

THE MEXICAN GOODWILL FLIGHT OF 1929

Santiago A. Flores

The Fall of 1989 marked the 60th anniversary of the good-will flight of Latin America by the Mexican Air Force. From August to November 1929, Col. P.A. Pablo L. Sidar and his mechanic, Sgt. Mec. Arnulfo Cortez Benavente, visited all the countries of Latin American in the Douglas O-2M called "Ejercito Mexicano".

THE PERSONNEL: Col P.A. Pablo Sidar, born in Ramos Arizpe, Coahuila, in 1890, served a tour in the army where he had earned the nickname "El Loco" (Crazy) because of his sense of humor. He joined the Mexican Air Force on 21 November 1920 and received his "wings" on 11 February 1922. He participated in numerous military campaigns that were characteristic of the unsettled time in Mexico. His performance under fire won for him the command of an "Escuadrilla", and later the command of the Primer Regimiento Aereo (1st Air Regiment). Much less is known about Sgt. Mec. Arnulfo Cortez. He fought in France during WWI as a non-commissioned officer and he had later joined the Mexican Air Force. In 1928, he had served as the mechanic for Col. Roberto Fierro during his flight to Central America in the Mexican-built "Baja California No. 2".

THE AIRCRAFT: The aircraft chosen by Col. Sidar for this epic flight was already in service with the 2nd Squadron of the 1st Air Regiment at Balbuena Airfield, Mexico City. Douglas O-2M, No. 18, was baptized "El Ejercito Mexicano" for the flight. This aircraft had been delivered to Mexico on 6 June 1929, but it had apparently been returned to the Douglas in California for modifications, since Col. Sidar and Sgt. Cortez were photographed alongside "Ejercito Mexicano" at the Douglas plant on 8/22/29.

THE FLIGHT: "Ejercito Mexicano" took-off from Balbuena airfield on 29 August 1929 with Col. Sidar at the controls and Sgt. Cortez in the rear seat. During the course of the good-will flight they made the following stops in the following order: Guatemala; San Salvador; Panama; Guayaquil, Ecuador; Lima, Peru; Santiago, Chile; Buenos Aires, Argentina; Montevideo, Uruguay; Rio de Janeiro, Brazil; Puerto Alegre, Brazil; Asuncion, Paraguay; La Paz, Bolivia; Lima, Peru; Guayaquil, Ecuador; Bogota, Colombia; Baraquilla, Colombia; Colon, Panama; Tegucigalpa, Honduras; Guatemala; and La Habana, Cuba.

On 8 November 1929, after making stops in the Yucatan and in Puebla, Col. Sidar brought the "Ejercito Mexicano" home to Campo Aere de Balbuena in Mexico City. There he was received by the President of Mexico, Lic. Portes Gil, military and civilian authorities, the diplomatic corps, and the general public. After the welcome, the President decorated Col. Sidar with the Medal "Merito Aeronautico" first class. Other Mexican flyers decorated at the same time were Roberto Fierro, Gustavo Leon, and Alfredo Lezama.

During the course of the good-will flight, the Mexican flyers visited 11 Latin American countries and crossed the high Andes mountains 5 times. They accumulated about 200 hours of flying time and covered approximately 26,000 miles.

During the flight, Col Sidar received many honors, medals, and trophies from the Latin American governments, including a Mexican flag from the Argentine government.

The "U.S. Air Service" magazine of May 1930 reported: "Col. Pablo Sidar of the Mexican Army recently established a new altitude take-off record with load using a Douglas O-2 observation plane. He took-off from the field at La Paz, Bolivia, 14,000 feet above sea level, with a useful load of 2900 pounds, after a run of less than 2500 feet. His mechanic accompanied him. The load consisted of 336 gallons of gasoline, 25 gallons of oil, and full military equipment." This flight took place at 0700 on 5 October 1929.

The flight also served as the basis of a Douglas advertisement that appeared in the May 1930 issue of "Aero Digest".

In his book, "Esta es mi Vida", Gen. Fierro reports that, during the flight, Sgt. Cortez wrote in his diary such things about Col. Sidar as; "This crazy man is going to kill me." When Col. Sidar found out about the diary, he got very angry and had Cortez discharged from the Air Force.

POSTSCRIPT: Col Sidar would lose his life on 11 May 1930 during an attempted non-stop flight from Mexico City to Buenos Aires, Argentina. His aircraft, an Emsco Model B-3, named "Morelos", crashed at Playa Cienoguita, Puerto Limon, Costa Rica.

Sgt. Cortez would later be reinstated in the Air Force by Col. Fierro, and would serve as his mechanic during the New York to Mexico City flight in June 1930. Years later Sgt. Cortez would serve as an Inspector at the Secretaria de Comunicaciones.

As for the "Ejercito Mexicano", it continued life in the 2nd Squadron until it was totally destroyed in a flying accident during a routine training flight at Balbuena aircraft on 21 January 1931.

NOTES ON DOUGLAS AIRCRAFT IN MEXICO

1. The Fuerza Aerea Mexicana received the following Douglas aircraft: 8 O-2C (s/n 358-365); 9 O-2M (s/n 608-616); and 3 O-2M-2 (s/n 925, 926, & 946).
2. The first Douglas aircraft were acquired by Gral. Aberlardo L. Rodriguez, the Military Governor of the territory of Baja California, for his campaign against the Yaqui Indians in 1926. The last example was serving with the Meteorological Department at Balbuena airfield when it made a flight on 27 May 1940 in an experiment to cure an ill infant.
3. Douglas No. 23 crashed on 21 January 1939. The aircraft was a total loss, but the pilot survived.

SOURCES

1. SEIS SIGLOS DE HISTORIA GRAFICA DE MEXICO 1325-1976, Vol. X, Gustavo Casasola, Mexico 1978.
 2. AERO DIGEST, May 1930, p 20.
 3. ESTA ES MI VIDA, Roberto Fierro Villalobos, Mexico 1964.
 4. U.S. AIR SERVICE MAGAZINE, May 1930, p 64.
 5. ENCICLOPEDIA DE AVIACION Y ASTRONAUTICA, Vol. 7 & 8, Ediciones Garga S.A. Spain.
- (Continued on bottom of page 19.)

- "In your review of the Monograph on the Chilean A-37 (SAFO #56), you included an editorial comment about 'the wire-mesh screens that hang from the lower lip of the jet intakes when the aircraft is parked and retract backward under the intake when the aircraft is airborne" and asked if the screens cover the intakes when the aircraft is taking off. The A-37 Foreign Object Damage (FOD) screens cover the engine intake whenever both an engine is running and sufficient weight is on the main landing gear to depress an activating 'squat switch'. The FOD screens retract automatically upon engine shutdown and after airborne. FOD screens were added because the General Electric J-85 engines installed in the A-37 are extremely vulnerable to FOD due to the fragile nature of the engine, the physical proximity of the engine intakes to the ground (only about 15 inches above the ground), and the tendency for jet engines to act like vacuum cleaners. In 1969, while a student pilot in Air Force Undergraduate Pilot Training, I was told the J-85 was so fragile that ingestion of a cigarette butt would damage the engine seriously enough to require immediate shutdown and replacement. The story may have been apocryphal, but it made the point about the need to religiously check the ramp for foreign objects as part of every pre- and post-flight check."

Bob Mills (SAFCH #139), 2413 S. 9th St., Arlington, VA 22204-2302.

I would like to raise an issue that adversely impacts SAFCH members (and all others interested in aviation history) and its access to quality reference information. Many SAFO readers are familiar with the outstanding Putnam series on aircraft manufacturers, air arms, etc. Putnam books have heretofore achieved high 'standards' of content in that they are well written, illustrated with large numbers of photographs including numerous 2-view/line drawings, and provide a wealth of generally useful data [aircraft specification, manufacturers serial numbers, military serial/bureau numbers, operating units (including service with the smaller air forces), etc.].

'Some recent changes have been made to their 'standard' format that SAFCH members should be aware of. Several recent titles published by Putnam have appeared in a new format that has noticeably reduces the number of pages and photographs, virtually eliminates 3-view/line drawings, and adopts lower standards for photographic reproduction - and then charges the same or higher prices as for their previous books. Quick comparison of some basic statistics between an original format Putnam book and one of the 'new' format titles provides some insight into the significance of the changes.

'OLD' FORMAT: Blackburn Aircraft since 1909 by A.J. Jackson sells for \$32.95 (as published by US Naval Institute Press in the USA), has 576 pages, 381 photos, and 67 line drawings.

'NEW' FORMAT: General Dynamics and their Predecessors since 1909 by John Wegg retail for \$42.95 (also available in the US from USNI Press), has 384 pages, and 300 total illustrations (photos and drawings).

"A reasonably knowledgeable person would expect a book about General Dynamics aircraft, whose aviation divisions are heir to the histories of some 14 different US aircraft manufacturers (including Consolidated, Vultee, General, and Cessna), would be at least as comprehensive and contain at least as many pages, photographs, and line drawings as a book on Blackburn. However, such is not the case.

The General Dynamics book is shorter, has fewer photographs, a lot fewer line drawings, and omits the histories of four of the 14 GD predecessor companies, including Cessna!

"I hope that other SAFCH members will join me in writing the published to ask them to reconsider the format change. If SAFCH members don't write to complain, individually and collectively, we'll all lose because less and less data will become available for research. The addresses to write are: Managing Editor, Putnam Aeronautical Books, PO Box 10, Teignmouth, Devon TQ14 9HH, England. Managing Editor, Naval Institute Press, US Naval Institute, 2062 General's Highway, Annapolis, MD 21401."

Bob Mills (SAFCH #139), 2413 S. 9th St., Arlington, VA 22204-2302.

"Now that life has become freer in Eastern Europe and tensions have been reduced, I hope that future issues of SAFO will cover the post-WWII histories of Eastern European air forces. I've already seen some pretty good information on the current Polish, Czech, and East German air forces in the popular aviation press, so hopefully some reasonably accurate historical information on national insignia, unit markings, order of battle, and organizations will finally see the light of day.

"I would like to suggest that sponsorship of overseas SAFCH members would be more attractive if a fair barter agreement could be arranged. I would be more than pleased to sponsor new SAFCH members from Romania, Greece, or Hungary in exchange for subscriptions to *Modelism Tehnimu*, *NEA*, or *Aero Historia*."

Bob Mills (SAFCH #139), 2413 S. 9th St., Arlington, VA 22204-2302.

[Editor's note: Anyone entering into a sponsorship agreement should begin with a basic exchange of subscriptions. The exchange of kits, magazines, books, etc. will follow naturally from this.]

There are a couple of points I would like to make about the Cambodian MiGs illustrated in the article 'MiG Mania #6' which appeared in SAFO #42. One of the drawings purports to show a Khmer MiG-15, but in a recent article in AIR ENTHUSIAST on the Royal Khmer AF, and in follow-up letters, it is stated that no MiG-15s served with the Cambodian AF, only MiG-17s. Also, the SAFO article illustrates a Cambodian MIG-15UTI with code 0111. The Cambodian had only two MiG-15UTI and I have photos showing them both; one coded 2403 and the other 2832. Perhaps the author, Nick Waters, would like to comment about this.

*While on the subject of MiGs, the June 1990 issue of AIR FORCES MONTHLY has an article on the MiG-21 which, in addition to brief notes on each user of the MiG-21 (and Chinese F-7), contains color side-views of Chinese, Polish, Vietnamese, and Zambian machines; color photos of Afghan, East German, Indian, and Yugoslav machines; and b&w photos of Chinese, Egyptian, Finnish, Indian, Israeli, Mongolian(!), and Yugoslav aircraft.

"MiG fanciers might also be interested in the May, November, & December 1989 issues of SCALE MODELS INTERNATIONAL which have a series of superb 1/72-scale plans of various MiG-21 types, plus large amounts of modeling information from Yugoslav authors who obviously have had close contact with the original aircraft."

John MacGregor (SAFCH #706), 13 Foggyley Gardens, Dundee DD2 3LG, Scotland.

"In my report on the Israeli MiG-23 article in IDF JOURNAL, you accidentally omitted, from the notes on previous defections, the following: 'Iraqi AF MiG-21, after attempted interception by Jordanian AF Hunters, on 12 Aug 68 ...' Also, the location of the Israeli Air Force Museum appeared somewhat garbled; it should have read, 'Beersheba's Hatzirim AFB'.

"By coincidence, the following issue of IDF JOURNAL (Fall 1990) contained more notes on the museum, with new expansion and construction in preparation for its official opening in Spring 1991. It mentioned that among the display of captured enemy aircraft is a Syrian Gazelle helicopter, downed in 1982 in Lebanon. (The same issue offers excerpts from the memoirs, so far published only in Hebrew and French, of former-RAF pilot Gordon Levett and his participation in the 1948 Operation Balak - airlifting dismantled Messerschmitts from Czechoslovakia to Israel - and Avak - the relief and resupply of the Negev Desert forces under Egyptian siege.)"

Ted Koppel (SAFCH #118), 3520 N. Rolling Rd., Baltimore, MD 21207-2202.

"During the typesetting of my article in SAFO #55 you lost an important 'not'; the sentence on page 83 referring to the M.F.8 should read 'they were not used during the campaign'. Also, some of the statement made in Doug Dildy's article do not agree with my sources, but it's mostly a matter of nit-picking.

"We didn't realize that there existed so much interest in Norwegian aviation. I received a large number of warm letters from all parts of the world after SAFO #55 came out. Most interesting was a letter from Finland on the M.F.11s used there. More research is necessary, but it contained some new leads.

"I am doing the preliminary work for an article on the RNoAF in Canada. If you know of anyone who can provide information on the Peruvian AF from 1943-55, I would like to get in touch, since I have some loose ends to tie up about RNoAF aircraft sent to Peru."

Knut Erik Hagen (SAFCH #904), Stamhusveien
67, N-1181 Oslo 11, Norway.

"I have some comments on SAFO #56: On page 123, Lithuanian Gladiator serials are mentioned as 701-714, but on page 104 we see a photo of Avro 626 '703'. My notes indicate that 4 Avros were delivered, which might mean 701-704 were Avros. This would explain the factory photo of Gladiator G-705, the first of the batch. What is correct?"

"Latvia had only DH-9A, not DH-4 or DH-9. These were acquired ca. 1925. Probably the order for Do-22 was for four, as this number was later sold to Finland by Germany. This may be the batch r= that could not be delivered to Latvia as it was then occupied by the Soviets.

"Karl Irbitis' book, 'Of Struggle and Flight' has been translated into Latvian, so VEF personnel can now read what their factory did before WWII. That facet of history had been completely erased by the communists during the occupation. By the way, the VEF factory emblem is still the same as Mr. Irbitis designed it."

F. Gerdessen (SAFCH #12), Fijnscheerderstraat
12, NL-4204 ES Gorinchem, The Netherlands.

"I would like to comment on the Klemm 35Bs used by the Lithuanian National Guard. The first aircraft was painted as shown in SAFO #39 except

that the colors were light cream and red. The other two aircraft were painted medium grey, without the sunburst. The insignia was a white double cross on a red shield. I myself saw these airplanes many times and also have written confirmation from Lithuania."

David D. Dulaitis (SAFCH #913), 417 Preston Circle, Sunny Hills, FL 32428.

"I would like to add to the information published in SAFO #56 on the Latvian and Lithuanian Air Forces. The following information is mostly from photos in my files.

"Latvian AF. Hind: serials 176-178. Gladiator: serial 114 (photo taken before delivery). Martin-syde A.R.1 (export Buzzard): serials 11, 14, & 21. Sopwith 1-1/2 Strutter: serial 13, Fairey Seal: serial 29 (on floats and wheels; anchor on rudder). Sop-with Camel: no serial visible. Stampe S.V.6: two photos; one taken before delivery, one after with Gladiators in background. Letov S.16: serial 29 (sic). Heinkel He.5: (two in front of hanger).

"Lithuanian AF. Gladiator: serial G.705. This well-known pre-delivery photo shows a white spot on the starboard upper wing which could be a national marking. The 'G', long suspected as being a delivery letter, could be a service serial since 'Eagles of the Third Reich', page 83, shows a Gladiator carrying the number G.709 on a Russian dump captured by the Germans. DH-89M: serial 701 and 702 (mentioned in a letter in Air Enthusiast #30; in the accompanying photo, 701 is faintly visible on the fuselage side. Fiat CR.20: serial 43. Anbo IV: serials 52, 62, & 63. Anbo 4: serials 672, 674, & 675. Anbo VI: serial 53. Dewoitine 372: Photo of one aircraft, could be pre-delivery. Aircraft appears to be silver, with top surface of wings, tailplane, and fins and rudder dark green. National marking on rudder and mid-wing.

"Blue Rider have brought out two more sheets of Baltic decals. BR216: early Lithuanian AF for LVG C.VI (2) - one with early colorful markings of maroon, green and yellow diamond, with white Lithuanian knight in center; Albatros D.III/D.V; 1-1/2 Strutter; Friedrichshafen G.III's; and Fiat CR.20 (3). BR403: early Latvian AF for Camel; 1-1/2 Strutter (2); and LVG C.VI. They have also brought out a vacuform Fiat CR.20 kit. Also, two Spanish Civil War sheets. BR214: Republican I-16 (9), SB.2 (5), and CCF G-23 (2) with two items for ground transport. BR.215: Nationalist and post-Civil War SB.2 (2), I-16 (4) and CCF G-23 (2)." Denis A. Hurl (SAFCH #326), 3 Spire Avenue, Whitstable, Kent, CT5 3DS, England.

"So far New Zealand has done little in the Gulf. On 20 August the government offered the UN the use of two RNZAF Andovers for peace-keeping duties; one of these being in the region with the Iran-Iraq Military Observers Group. It was due to return home in September, but its stay in Iran was extended to the end of the year. Nothing seems to have come of this proposal.

"On 27 August the Red Cross made a request for supplies to help feed the large number of refugees leaving Kuwait and Iraq. A decision was made that day to send a 40 Squadron C-130H Hercules loaded with 16 tons of milk powder to Egypt. N27002 left on 30 August with 11 crew. The aircraft was then used for three refugee-evacuation

flights. On 12 September it was decided to use a Boeing 727, also of 40 Squadron, for more such flights. The aircraft was in Britain for the Battle of Britain commemorations. Eleven flights were made with the aircraft returning to NZ on 1 October. This made a total; of 14 flights to Bangladesh, India, Pakistan, the Philippines, and Sri Lanka. A report in the NZ Herald (1st Dec) stated that as the UN has voted to use force in the Gulf, the newly elected National government might be willing to send some Hercules transports in a support role.

"The October 1990 issue of NZ Wings reports that 104 Flight at Woodbourne is to disband on 1 January 1991. Its three Cessna 421c Golden Eagles will then be sold. The retirement of the Strikemaster has also begun during 1990 as the aircraft reached the end of their fatigue lives." Paul Adams (SAFCH #773), 81 Ponsonby Road, Ponsonby, Auckland 1, New Zealand.

"While reading over my recently-arrived back issues of SAFO, I came across a discussion of the Cuban Hawker Sea Furies on page 86 of #29. This struck a responsive chord, as I was serving on USS WALLER (DD466) during the unfortunate experience at the Bay of Pigs. I still remember the events of those week vividly, as we were all bitterly disappointed, not only the debacle that ensued, but by the startling withdraw of US air and naval gunfire support the night before the landings. Although I was newly assigned to the ship (and what does an Ensign know anyway?) my battle station was as Main Battery Director Officer and during the transit from Norfolk I gleaned some knowledge of what was to come.

"Since US Naval air support was planned and an awesome array of follow-on forces was just over the horizon, we were briefed on what to expect from Cuban aircraft. I distinctly remember the message stating that friendly B-26's could be distinguished by virtue of their carrying blue-white-blue invasion stripes on the wings. Although the incoming raids came in several hundred feet above the water, some flying just down our starboard side, I could not see any such stripes on the aircraft; perhaps someone did not get the word, or there just was not time to apply them.

"Intelligence reports stated the main opposition was expected to be the Lockheed T-33's. I do not remember any reference to Sea Fury. There was a reference to a single converted airliner that could be used for photo reconnaissance; it was British-

built, civil, and multi-engined, probably a Vickers Viscount. I know it existed because we saw it on high-altitude overflights and we tracked it with the main battery director, radar, and though binoculars.

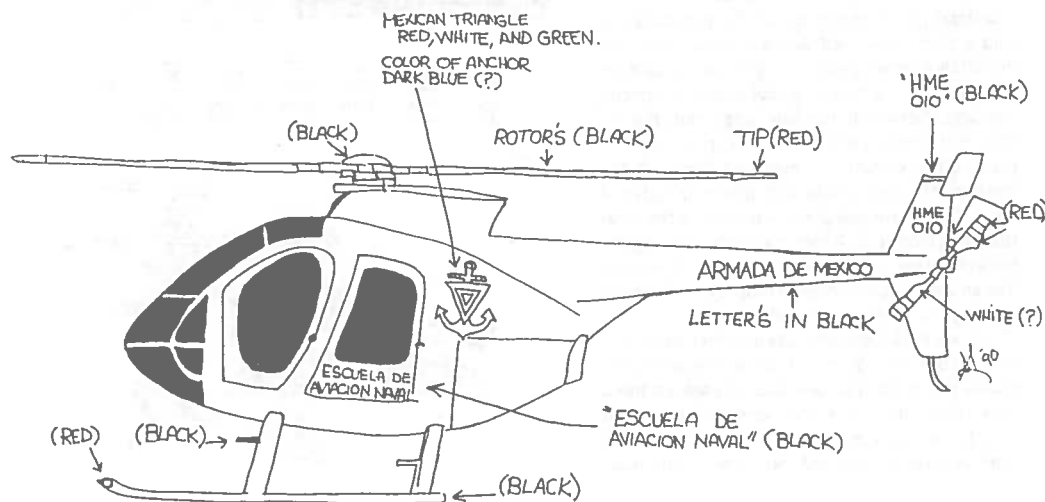
"During the subsequent intercepts and fighting, I never heard report of anything other than T-33's attacking the B-26's. I will never forget those days, because of the anguish of those in our communication shack, and in the voices of the US Navy A-4 pilots begging to intercede upon hearing calls for help in clear English. The planes were, by then, flown by the Alabamans from the Birmingham Air National Guard, the last unit to still have B-26's in their inventory. We saw one shot up B-26 flying low over the water, one engine out and feathered, and the other smoking, outbound through the haze over the beachhead. We heard later that it crash landed in the water alongside the USS RANDOLPH (CVS-9), which was part of the task group, some 50 miles south, waiting for the call that never came."

Thomas R. Nelson (SAFCH #980), 337 East Third St., Hinsdale, IL 60521.

"The Mexican Air Force and Navy have recently received some new aircraft. The following is taken from ROTOR & WING INTERNATIONAL Aug. 1990: 'As part of the 'Andean Plan' to provide emergency drug-interdiction assistance to Central and South American nations, a deal is reportedly about to be signed that would provide for the immediate transfer of nine retired U.S. Army UH-1H Huey helicopters to Mexico. More helicopters would be transferred later.'

"It was reported in AIR FORCE MONTHLY, Sept. 1990, that the FAM has acquired a G-1159A Gulfstream III for VIP use. This aircraft, Mexican Air Force number TP-06 (Transporte Preidencial No. 6), is c/n 352 and it had been operated as HB-ITM for Lonair.

"AIR FORCES MONTHLY, Aug. 1990 reports that on 14 June 1990, the Mexican Navy received two of four McDonnell-Douglas MD-500E helicopters to be used for training at the Escuela de Aviacion Naval at Bajadas Veracruz. The side-view drawing of HME-010 shown here is based on color photos provided by McDonnell Douglas Helicopter Company of Mesa Arizona. The Mexican Navy prefix HME stands for Helicoptero Marina Entrenamiento (Navy Training Helicopter).



McDONNELL DOUGLAS MD500E, MEXICAN NAVY 1990.
(HELICOPTER IN OVERALL IN TRAINER YELLOW SCHEME)

The decal sheet (12.5 by 15.5 cm) contains Czech national insignia (separate color segments), Russian stars, letters for civilian version, a full set (0 to 9) of white Czech serial numbers, and a full set of USSR serial numbers (red outlined in white). Some stenciling (about 10 items) are also provided. Unfortunately, these decals are too glossy, but they are useable.

The differences between the Mi-8 and -17 versions are provided for by the inclusion of alternate parts:

Some Czech AF Mi-17 used for SAR duties have a small crane situated above the side fuselage door. For the 'masochists' among us, a detailed photograph of this installation is available from the author of this review."

MC-202: 1/48-scale injection molded, Tauro.

The entire engine area is intended to be "disassembleable" to show off the engine detail. Unfortunately, that means the only part of the forward

I'll eventually finish this turkey, since I've got a serious case of Macchi-lust, but unless you're a fanatic, you might want to try the C.A. Atkins MC 200 vacuform instead (it's easier to build) while lighting votive candles that somebody else will come out with a more constructable kit.

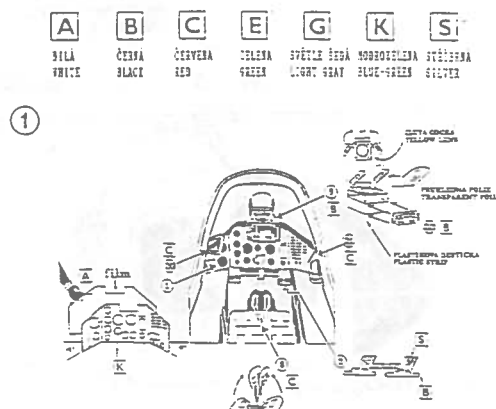
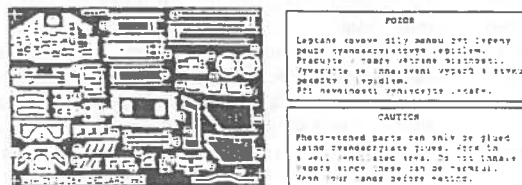
[illegible]

From Czechoslovakia comes a pair of photo-etched "detail sets" for the 1/48- and 1/72-scale kits by OEZ and KP. The sets are identical in content differing only in size. The brass sheets measure 5.8 cm by 3.8 cm in 1/48 scale and 3.8 cm by 2.5 in 1/72 scale. Each sheet contains 31 parts and one plastic film for detailing the cockpit interior (instrument panel, gun sight, rudder pedals, ejection handle, rear-view mirrors, cockpit handles & locks, etc.) and the exterior (boarding ladder, antennae, vanes for the instrument probes, and a lot of things that would need research before I could identify them).

These are both excellent sets and they are available from the SAFCH at a fantastically reasonable price. I've only one of each on hand now (available on a first-come first-served basis), but our Czech friend has promised to send as many as we need. So, order yours now.

eduard Suchoj Su 25 K 48-001
1/48 Detail set

Tato sada je určena k použití na modelu SU 25X 1/48 OZ Letchrad.
This set has been developed to fit the OZ Letchrad 1/48 kit SU 25X



This is one of the "parts kits" that SAFO members Ken Robert has available for use with the Combat vacuumform kits. This kit contains 30 parts consisting of 9 modeled in white plastic (2 seats, 2 control sticks, 2 cyclic sticks, 2 main wheels, & nose wheel) and 21 in white metal (main instrument panel, 2 rudder pedals, 4-piece main undercarriage, 4-nose undercarriage with optional landing light, and two 5-piece main rotor assemblies).

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NORWEGIAN CAPRONIS

Johnathan Thompson

Four Caproni Ca-310 Libeccio (Southwest Wind) light bombers were acquired by the Norwegian Air Force on an order placed with the Italian government in June 1938 on the authority of Col. Gulliksen, Commander in Chief of the Royal Norwegian Air Force, along with engines and other equipment, at a total cost of 1,000,000 crowns worth of Norwegian cod! The aircraft were numbered 501, 503, 105, and 507. It was planned that twenty further Ca 310 would be purchased, some to be assembled under license by the Haerens Flyvefabrik (Army Aircraft Factory) at Kjeller.

The initial four were received in October 1938 and were based at Lillestrom, where they languished without proper maintenance for over a year in severely cold weather. In test flights the Norwegian crews experienced strong vibrations and various malfunctions and CAB (Caproni Aeronautica Bergamasca) sent a technical commission, including engineers Chiodi and Tramonte, to Oslo in July 1939. One of the main problems found was improper lubrication for the conditions. Despite an unfriendly if not hostile attitude on the part of the Norwegians, the Italians succeeded in making the four aircraft (including 503, which had been transferred to postal service with the civil registration LN-DAK) fully serviceable. To further mollify the Norwegians, they suggested that further orders be filled with the improved type Ca-312bis; this was accepted.

When the Germans invaded on 9 April 1940, the four Ca-310 equipped a Bombervingen based at Sola, along with nine Fokker C.V. The Capronis, nicknamed Klippfisk because of their purchase with fish, participated in only one or two missions. They operated with their landing gear retracted, gear doors closed, and skis attached externally.

Powered by two Piaggio P.VII C.16 seven-cylinder radial engines producing 450 hp at take-off and 460 hp at 1600 m, the Ca-310 had the following dimensions: span 16.42 m, length 12.21 m, height (tail down) 3.50 m, and wing area 38.70 m². The empty and loaded weights were 2960/4110 kg respectively. The performance included maximum speeds of 322 km/h at sea level and 348 km/h at 2100 m, a cruising speed of 290 km/h at 2100 m and a stalling speed of 103 km/h. The climbing times to altitude were 2 min 3 sec to 1000 m, 3:58 to 2000 m, 6:24 to 3000 m, 9:47 to 4000 m, and 14:43 to 5000 m. The service ceiling was 7500 m and the normal range 1070 km. The armament consisted of two SAFAT 7.7-mm machine guns, one forward-firing and one in a dorsal

turret, and a 200-kg bomb load, although combinations of as many as four 100-kg, six 50-kg, or ten 20-, 15- or 12-kg bombs were specified. Some Ca-310 were built with P.VII C.53 engines developing 500 hp for take-off and 470 hp at 3500 m, but I doubt that the four Norwegian aircraft were so equipped. These engines increased the maximum speed to 365 km/h at 4000 m, but the rate of climb was markedly reduced.

On 11 August 1939 Norway contracted with Caproni di Taliedo (the head office) for two Ca-312bis and in mid-December for the manufacture of the type under license by the Haerens Flyvefabrik at Kjeller. The Norwegians intended to equip one Rekognoseringbataljon with twenty Ca-312bis by 1 July 1940, with a squadron of nine aircraft at Fornebo and another at Kjevik and Sola. These would have consisted of the first two ordered (509 and 511), thirteen more built by CAB (presumably odd numbers 513 through 537), and five (539-545) built at Kjeller.

The first Ca-312bis of the order (constructor's number 488, Norwegian military number 509) was flown during the period 29 March to 6 April 1940 by test pilot Ettore Wengi. With Piaggio P.XVI R.C.35 nine-cylinder radial engines, three-blade metal propellers and empty/loaded weights of 3875/5475 kg, it achieved 350 km/h at sea level, 426 km/h at 4000 m and 434 km/h at 4460 m. The climbing times to altitude were 1 min 13 sec to 1000 m, 3:24 to 2000 m, 5:15 to 4000 m, and 9:31 to 5000 m. The take-off and landing distances were 180 and 230 m respectively, and the rate of fuel consumption was 0.41 kg/km.

The production aircraft were held up by the late delivery of engines and could not have been completed before August. Similar delays occurred at Kjeller and the five aircraft were in various stages of construction when the Germans attacked the factory. The Norwegians were unable to collect the fifteen CAB aircraft, including numbers 509 and 611. In any case the Italians became allies of the Germans on 10 June 1940. All fifteen were ultimately modified as light transports and delivered to the Regia Aeronautica during June-July 1942.

The information for this article is from the book "Gil Aeroplani della Caproni Aeronautica Bergamasca", volume two, by Rosario Abate.

Johathan Thompson (SAFCH #988), 1331 South Birch St., Santa Ana, CA 92707.

(Photos on page 2.)

6. PIONEROS DE LA AVIACION MEXICANA, Ing. Jose Villela Gomez, Apuntes Biograficos, Mexico City, 1974.

7. BREVE HISTORIA DE LA AVIACION EN MEXICO, Jose Villela Gomez, Mexico 1971.

8. McDONNELL DOUGLAS AIRCRAFT SINCE 1920, Rene Francillon, Putnam Books.

9. KULKUCAN, Magazine of the Mexican Air Force, Tomo I, No. 8, 15 June 1940.

10. Ing. Adolfo Villasenor Mancias, Mexico D.F. Notes on the Douglas O-2Ms of the Mexican Air Force.

11. Harry Gann, North American Aviation Corp. photos and information on the Douglas O-2M "Ejercito Mexicano".

Santiago A. Flores (SAFCH #588), HHC 3/37AR; TRANS PLT, Ft. Riley, KS 66442.

(Photos on front and back cover and on page 2.)

"The new MPD decal sheets from Czechoslovakia should be of interest to SAFO readers. (1) Available in 1/72 scale is a 5 cm by 8 cm sheet for Indian Su-7s which contains decals for two IAF Su-7s; B817 camouflaged green, grey, and dark brown and B-845 black overall with yellow nose and sharkmouth. (2) Available in both 1/48 and 1/72 scale are decals for a Czech Su-25K in standard camouflage with a white sharkmouth and an undressed young woman for nose art. (3) Available in both 1/48 and 1/72 are 5 cm by 8 cm sheets for a sharkmouth Czech MiG-21MF." [Editor's note: This latter scheme is described elsewhere in this issue under 'posters'.]

"Three new 1/72 Delta Hobbies decals sheets should also interest SAFO readers. (1) Sheet 010 contains decals for four Fi-156 Storchs; three are German but one is a Spanish AF aircraft in the mid-1940s serialised 96-1 and camouflaged light grey over light blue. (2) Sheet 014 covers two Bloch 200 schemes; one French aircraft in Syria 1941 and a Bulgarian (ex-Czech) Aero-built MB-200. (3) Sheet 016 provides five MiG-21 schemes; three Russian (MF, ST, & bis), a Polish unpainted MF

with unit badge, and a camouflaged Vietnamese MiG-21PFMA." Daniel Petz (SAFCH #623), Na Ladvi 21, 18200 Praha 8, CZECHOSLOVAKIA.

"AERO DECALS has recently issued decals for post-war Polish aircraft (MiG-15, -17, -19, -21, 23, & -29) as well as the Mi-24). These decals are in the usual format of 10 cm by 15 cm and each sheet contains enough decals to finish at least one aircraft (national insignia, tactical codes, full stenciling in different colors, and air regiment badges where appropriate). The printing is quite sharp, the registration good, and the colors generally good. The only minor criticism is the lack of sharpness of some of the smaller items. [On the MiG-29 sheet, the shape of some of the numbers (especially the '7') is somewhat suspect, and the body of the Warsaw 'siren' should be yellow (but only on Fulcrums). This latter error can easily be corrected with a well-pointed brush and a drop of yellow paint.]

"The Delta Hobby decals for the Letov S-328, Arado Ar-96, Siebel Si-204 (including one Polish aircraft), Fiesler Storch, MiG-21, and Bloch MB-

200 are of even higher quality in both sharpness and printing than the Aero Decals. I can highly recommend all sheets in this series.

"Anyone interested in any of these decals can contact me at the address below."

Wojciech Butrycz (SAFCH #981), ul. Facimiech 12A m.25, 30 667 Krakow, POLAND.

[Editor's note: The Delta Hobby decals are described in more detail in the letter from Daniel Petz printer above. Wojciech also included a full list of Techmod decals. This is too long to reproduce here; suffice it to mention those sheets that contain markings for Polish aircraft: Si-204D, Spitfire V, Hurricane IIC, MS-406, Lysander, Wellington IC, Lancaster BI, & P-47D. Besides the Polish MiGs, new Aero decals will give markings for Polish Hurricane I, Wellington, Beaufighter, Mosquito, Lancaster, Mustang I/IV, & Spitfire IX. Wojciech also mentions that decals will soon be available for Polish aircraft in the September Campaign; we have been waiting a long time for these.]

magazines-magazines-magazines-magazines-magazines-magazines-magazines-magazines-magazines-magazines-

AEROPLAN: I thought it was about time I sent a follow-up to my review of the Yugoslav magazine 'Yuvam Aeroplan' last published in SAFO #54. A couple of small errors appear there: the contents of 4/89 were listed as 5/89 and 5/89 as 6/89.

The good news is that this magazine is still going strong and gets better with 2/90 and 3/90 at 40 pages each and an English summary. It now calls itself just 'Aeroplan'. The bad news is that the price which is now \$32.00 for six issues; a bit high I feel. Anyone trying to get this magazine should write: Jugoslovenska Knjiga, 11000 Beograd, Trg Republike 5/VIII, Yugoslavia. I have obtained 'Aeroplan' and other Yugoslav publications from them and they appear to take overseas currency for payment, at least they took my pounds so it should be no problem with US\$. The following is a summary of recent issues. All articles and drawings refer to aircraft in Yugoslav service unless noted otherwise.

6/89: Color side-view drawings of MiG-21, Bf-109E, and a partisan Breguet XIX; 10-page article on modeling the MiG-21 (continued from 3/89) including 4 pages of drawings; 3-page article on the partisan Breguet XIX plus one good color 3-view; 10-page article on the Bf-109E including a page of color side-view drawings and 3 pages of line drawings; part 12 in the series on Yugoslav markings (4 pages).

1/90: Color side-view drawings of Yak-1 and 1920's lightplane 'Sveti Dorde'; 13-page article on the Yak-1 including two 3-view drawings and one page of side-view drawings; 4-page article on the 'Sveti Dorde' (Saint George) including one page of drawings.

2/90: Color side-view drawings of Bf-109E, Hurricane, and Cierva C.30A; 12-page article on the Bf-109E continuing from issue 6/89 including 3 pages of drawings; 8-page article on Yugoslav-built Hurricane '2337' including 3 pages of drawings.

This aircraft was captured by the Italians and photos/drawings show Italian markings on it.); 8 color side-view drawings of Yugoslav military aircraft in April 1941 (4 fighter and 4 bombers); 5-page article on the Cierva C.30A including 2 pages of drawings; one page on civil schemes on the Utva 75 lightplane.

3/90: Color side-view drawings of DHC Beaver and 1930's Yugoslav civil aircraft M.M.S.3; 8-page article on the DHC Beaver including 3 pages of drawings; 7-page article on P-38 Lightning with special reference to 44-25786 which forced landed in Yugoslavia in April 1945 with 2 pages of drawings including it in Yugoslav markings; color side-view drawings of Yak-1 and Il-2; 4 pages article on the M.M.S.3 including one page of drawings plus very large center-fold color side-view.

Tony Morris, Ashbourne House, Marsh Gibbon, Bicester, Oxon OX6 0HW, England.



AIR ACTION. "It has recently been brought to our attention that a review of AIR ACTION magazine recently appeared in your publication. While we appreciate the plug, you should note that it is available at most of the better hobby shops in this country.

"Subscriptions are offered by Flightdeck Models, PO Box 884333, San Francisco, CA 94188, at 6 issues for \$48.00. They accept Visa, MC, and American Express. The magazines are mailed in a manila envelope with cardboard stiffeners to prevent mutilation by the post office. Back copies are available for \$7.50 each (the current retail price), plus \$3.00 postage and handling per order. "Our firm is the US distributor and we would like to see the publication in more hobby shops. However, our nine copy minimum order for the trade causes most small shops to think twice about carrying the product."

Western Aviation Distributing Co. 201 Sansome St., San Francisco, CA 94104.

"Since our publisher is not much interested in individual subscriptions to AERO from abroad (bureaucracy still!), I suggest SAFO readers send their orders to: Hobby Centrum, Szekspira 4/248, 01-913 Warsaw, Poland. A one-year's subscription (12 issues) costs US\$ 36 (or local equivalent in freely-exchangeable currency) including surface mail (air mail extra). Payment should be by IMO or bank check made payable to Hobby Centrum. By the way, Hobby Centrum is run by a good friend and fellow modeler."

Wojciech J. Gawrych (SAFCH #800), Nowowiejska 4m10, 00-649 Warszawa, Poland.

[Editor's note: The most recent AERO (6/90) has glossy covers and higher quality paper allowing for better reproduction of the photos.]

JEDENASTKA

A Developmental History of Poland's Primary Fighter

Doug Dildy

In September 1933, Poland was the first nation to have a fighter force equipped entirely with all-metal monoplanes; thirteen squadrons were flying the PZL P-7a. Panstwowe Zaklady Lotnicze (PZL), literally the "National Aviation Establishment", led the world in the transition from the slow, but maneuverable, post-WWI, opened-cockpit, fixed-gear, fabric-covered biplanes to the fast, hard-hitting, pre-WW II, canopied, retractable gear, all-metal monoplane fighters. Yet, only six years later Poland's Lotnictwo Wojskowe, equipped with 12 squadrons of PZL's follow-on P-11c (plus three of P-7a), found itself overwhelmed by a foe who had completed this transition. Poland had not.

The story of Poland's failure to complete this transition is the story of the PZL P-11c "Jedenastka", the Polish word for "the Eleventh" as it was fondly referred to by the Polish pilots and ground crews (1).

This story begins in the late 1920s when, after an ambitious expansion program using mainly French machines, Col Ludomil Rayski replaced General Włodzimierz Zagorski as chief of Military Aviation. Col Rayski's plan for the Polish Air Force differed from the expansion program underway since it had as its two primary goals the conversion of the service entirely to aircraft of native designs and the consolidation of the entire aviation industry under state control (2).

To aid in the conversion to home-designed aircraft, Poland was fortunate to have a number of talented aeronautical engineers just graduating from national technical universities and joining the fledgling aviation industry. Chief among these was young Ing. Zygmunt Pulawski, born in 1901 (3).

The Polish aviation industry consisted primarily of E. Plage and T. Laskiewicz Company of Lublin (later named simply "Lublin") and the Podlaska Wytownia Samolotow (PWS) at Biala Podlaska building French designs under license. Gen Rayski awarded these companies developmental contracts for original designs while gradually transforming the state owned CZL repair workshops into the major national production establishment. PWS produced 80 PWS10 parasol monoplanes as an interim fighter to bridge the gap between the disastrous SPAD-Bleriot 51/61 (See SAFO #6, "The SPAD 61C1" by Tomasz Kowalski) and the PZL designs. In 1928, the CZL became the PZL and, the very next year, it turned out its first five prototypes. The first was the Pulawski designed P-1. This nimble, gull-winged monoplane fighter set the pattern for Polish fighter aircraft of the 1930s (4).

The P-1 participated in the 1930 Rumanian fighter competition where it outperformed all other aircraft. Meanwhile, PZL shifted from in-line, liquid cooled engines (the P-1 had a 600 hp Hispano-Suiza in the second prototype) to air-cooled radials. This and other refinements resulted in the P-6, powered by the 450 hp Bristol Jupiter VI FH. The next year this aircraft flew in the U.S. National Air Races in Cleveland where it proved to be 30 mph faster than the current USAAC fighter, the Boeing P12E.

Additionally, its all-metal, semi-monocoque fuselage made a great impression on American authorities (5). With further refinements, the basic design emerged as the P7a; the first PZL product ordered into quantity production: 149 were built in 1933/34. Its contemporaries were: the American Boeing P12E, British Hawker Fury biplane, French Morane-Saulnier MS-225 parasol, German Arado Ar.65 light biplane, the Italian Fiat CR-32 sesquiplane fighters, and the Soviet Polikarpov I-15/15bis (6). Poland had every reason to be proud: its fighter force was the best equipped in the world in 1933.

Unfortunately for Polish fighter development, designer Pulawski was killed (at age 30) in an untimely air crash in March, 1931. He had just initiated the final development of his basic design when he died. Engineer Wsiewolod Jakimiuk carried on the work, which resulted in the PZL P-11a. After six prototypes, 50 were produced for L.W. squadrons. With a final redesign of the front fuselage and repositioning the engine and cockpit for better visibility, the definitive Polish fighter emerged; 175 P-11c were built in 1935/36.

Powered by the 560-hp Bristol Mercury V S2 radial, the P-11c could attain a maximum speed of 185 mph at sea level and 242 at 18,000 feet. Being 15 mph faster than the P-7a at sea level and 45 mph faster at altitude, the P-11c soon supplanted its predecessor in seven Eskadri Mysiłskie and equipped another five (7). The older and less efficacious P-7a and P-11a were relegated to training tasks.

However, by the time the "Jedenastkas" began to arrive at their units, the design, while still at the forefront of fighter development, was in danger of being surpassed. Its contemporaries were: the American Boeing P26A Peashooter fixed-gear monoplane, the British Gloster Gladiator canopied biplane, the French Dewoitine D-501/510 fixed-gear monoplane, the German Heinkel He.51 biplane, Italian Fiat CR-42 biplane, and the Soviet Polikarpov I-153 retractable gear biplane.

In the mid-1930s, fighter technology was advancing at a tremendous pace: the Boeing P-26 gave way to the Curtiss P-36/P-40 series, the Gloster Gladiator was replaced by the Hawker Hurricane, the D-501/510 was surpassed by the MS-406 and, later, D-520, the He.51 yielded to the superb Bf.109, the CR-42 to the Fiat G-50 and the Macchi MC-200, and the I-15/153 to the Polikarpov I-16. In the next three years, the rest of the world completed the transition to fast, enclosed cockpit, retractable-gear monoplane fighters. But, Poland did not.

The reason Poland did not is two-fold. First, with limited national resources and great requirements, in order to fulfill Rayski's plan of completely converting to indigenous aircraft production, the PZL design bureau had to turn to the replacement of Potez "Assault" aircraft with its own design; the P23 Karas. After that, largely for the purposes of national prestige, they turned to the challenge of producing a fast, all-metal, retractable gear medium bomber; the PZL-37 Los.

The fighter design team was not idle. They continued to refine the basic "Jedenastka" by enclosing the cockpit and tightly cowl-

ing a newer, higher-output engine; the 1050-hp Gnome- Rhone 14N21. The result was the P-24. They also preceded to develop an enclosed-cockpit, retractable-gear, all-metal, monoplane fighter; the P-50 "Jastrzab" (Hawk). Design work began in 1937, but problems in obtaining an engine of sufficient power and with the retractable landing-gear mechanism resulted in the completion of an underpowered, prototype in October 1938 (8). It was no improvement in performance over the P-11 itself.

The second problem with the Polish fighter program was more insidious; its success on the world market. With the world of the mid-1930s limited to less than a dozen countries producing fighter, the possession of a world-class design attracted a lot of attention and customers. As a result, Poland sold 50 P-11b to Rumania and, using basically the same production facilities, 96 P-24 to Rumania, Bulgaria, Greece, and Turkey (9). By keeping these facilities occupied with export production, PZL prejudiced its capability of completing the transition from fixed gear, open cockpit fighters to the faster, retractable-gear, enclosed-cockpit interceptors.

In fact, PZL, despite its ability to turn out contemporary medium bombers (PZL-37), had so forfeited its 1930 lead on fighter technology that, in time of crisis, it could mass produce nothing but a somewhat refined P-11.

Specifically, when the danger of an overtly aggressive Nazi Germany finally made itself plainly obvious, the new commander of the L.W., General Jozef Zajac, ordered 500 of the new, untried P-50 "Jastrzabs." However, the initial trials of the simple prototype showed acute problems of handling and overall performance (its speed was only 40 mph faster than the fixed gear P-11s) in addition to engine-power and landing-gear shortcomings. PZL had no choice but to offer an upgraded version of the "Jedenastka;" the P-11g "Kobuz," to fulfill the order (10).

General Zajac had to settle for 150 P-11g (11) and an order for 160 MS-406 from France (12). In any event, it was too late. The die had been cast and Poland was soon caught up in a catastrophe of national failure. Only the P11g prototype (a converted P-11c airframe) would see combat with the 132 P-11s and 30 P-7a in the Lotnictwo Wojskowe fighter squadrons.

Despite their acute obsolescence, the P11s acquitted themselves well (The P-7a story was told in SAFO, #51). For 114 "Eleven's" lost, they brought down 120 German aircraft (13). Their mission was to defend the skies of Poland against attacking bombers. When given sufficient warning and when flown en masse, even against large Luftwaffe bomber formations, the "Jedenastkas" of the Pursuit Brigade initially blunted the enemy air raids and for the first two days of the war no bombs fell on Warsaw. After Luftwaffe tacticians changed their approach and forced the Brigade into wasteful, standing patrols, the bomber formations overwhelmed the meager defenders. Because the speed of the P-11 was only a little faster than the Do.17 and He.111 bombers, the Polish fighter pilots were forced into long tail chases, driving straight up to point blank range so that the "Jedenastka's" two (and sometimes four) rifle caliber (7.7 mm) Wzor 33 machine guns (14) would have a telling effect. This, of course, resulted in extended exposure to the bombers' defensive fire and relatively high losses when attacking massed Kampfgeschwader formations. The Polish fighters lost one P-11 for every two twin-engine bombers that they shot down. Against the slower, more ungainly Stukas, the kill-to-loss ration was much better 6 to 1.

Many P-11 attacks on the raiding bomber formations were thwarted by the intervention of German escort fighters. Four

times the PZLs were force to fight relatively large engagements against the "Zerstörers," Goering's pet escort fighter. The P-11 traded one-for-one in fighter-versus-fighter combat against Messerschmitt's large, lumbering, twin-engine Bf.110. In a similar number of engagements against the superb Bf.109, however, the story was sadly different. For each single-engine Messerschmitt brought down, the Lotnictwo Wojskowe lost six P-11! If nothing else, this grimly highlights the tragedy of Poland's stunted fighter development.

The PZL P-11c "Jedenastka" is truly the story of Poland's failure to finish the transition to fast, retractable-gear, canopied fighter aircraft. That the courageous and dauntless pilots of the fighter dyons could do as well as they did, is a tribute to both their own determination, skill, and resourcefulness as well as to the soundness of the basic Pulawski design. It just should not have had to be that way.

Douglas C. Dildy (SAFCH #844), General Deleviery, Mexico Beach, FL 32410. (From Jan. '91 to April '91.).

FOOTNOTES:

1. Munson, *Fighters, Attack and Training Aircraft: 1939-1945*, 1969; pg 100.
2. Cynk, "Blitzkrieg," *Airpower*, June, 1983; pg 34.
3. Ibid, pg 31.
4. Ibid, pg 34.
5. Ibid, pg 33, 32.
6. Green and Swanborough, *Flying Colors*, 1981; pg 28-38.
7. Weale, *Combat Aircraft of World War Two*, 1977; pg 184.
8. Cynk, pg 44.
9. Weale, pg 184.
10. Cynk, pg 46.
11. Musialkowski, "The Pulawski Fighters," SAFO #51; pg 88.
12. Cynk, pg 46.
13. Munson, pg 100.
14. Ibid.

NOTES ON SQUADRON EMBLEMS (Page 24)

111th Esk: Source: SAFO #4, Apr 1976, "Ansald A.1 in the PAF," Reynolds; pg 92. Details: White circle with red vertical stripes and 13 blue stars, red hat with black band and blue/red feather, crossed brown-handled scythes w/silver blades.

112th Esk: Source: Cooper and Batchelor, *Fighter*, 1973; pg 84. Details: Black rooster with red combs above and below the head. Red border to triangular shield. Note: Taken from right side of aircraft.

113th Esk: Source: Green and Swanborough, *Flying Colors*, 1981; pg 34. Details: Owl overall black with yellow wing feathers, bill and talons. Green eyes with black pupils. Red border to triangular shield.

114th Esk: Source: SAFO #29, Oct 83, "PZL P-11c," Kowalski; pg 10. Details: Black swallow on white triangle, border color unknown.

121st Esk: Source: Same as above. Details: Stencil of White "Winged Arrow"

122nd Esk: Source: Same as above. Details: White "Paper Horse" with black outline.

123rd Esk: Squadron emblem unknown. Unit flew P-7a.

131st Esk: Source: SAFO #4, Apr 76, "PWS.10," Kowalski; pg 95. Details: Black raven with blue wing and tail feathers and blue highlights around eye, yellow bill. Note: On white diamond, border color unknown.

ESKADRI MYSLIWSKIE EMBLEMS

(FIGHTER SQUADRON INSIGNIA)

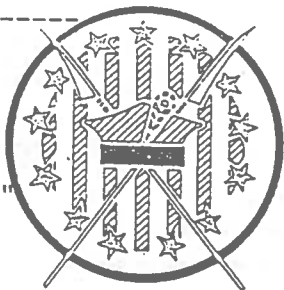
DISPOSITIONAL AIR FORCE

Pursuit Brigade

Dyon III/1 -----

111th Esk

"Kosciuszko"



112th Esk

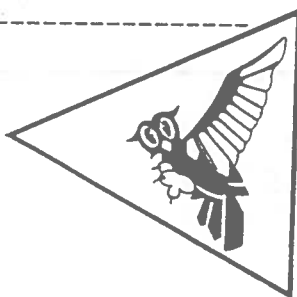
"Fighting
Cocks"



Dyon IV/1 -----

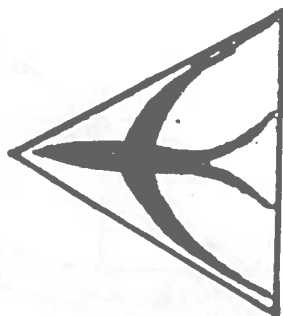
113th Esk

"Owls"



114th Esk

"Swallows"

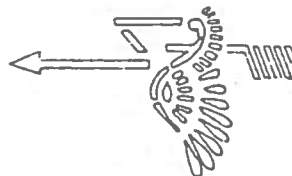


ARMIES AIR FORCES

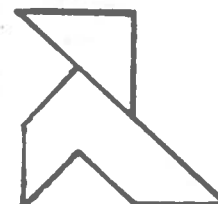
Dyon -----

III/

2



121st Esk
"Winged Arrow"

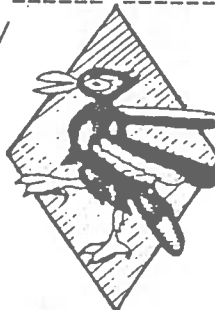


122nd Esk
"Paper Horse"

Dyon -----

III/

3



131st Esk
"Ravens"

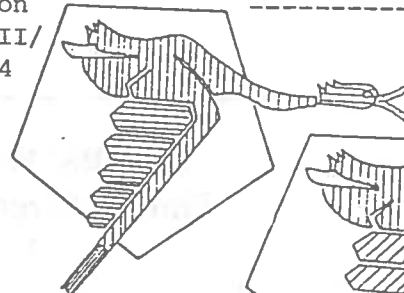


132nd Esk
"Ravens"

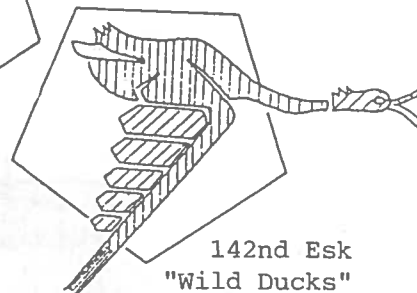
Dyon -----

III/

4



141st Esk
"Wild Ducks"

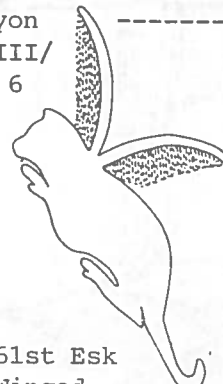


142nd Esk
"Wild Ducks"

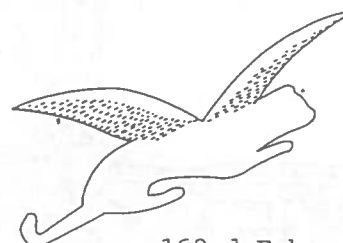
Dyon -----

III/

6



161st Esk
"Winged
Ermine"



162nd Esk
"Winged Ermine"

132nd Esk: Source: Same as above. Details: Black raven on white diamond.

141st Esk: Source: SAFO #9, Mar 78, "4th Pulk Lotniczy," Kowalski; pg 4. Details: Duck has red body with blue head and wings, yellow bill and tail feathers. Note: Taken from right side of aircraft.

142nd Esk: Source: Same as above. Details: Duck has red body with green head and wings, yellow bill and tail feathers. Note: Taken from right side of aircraft.

151st Esk: Squadron emblem unknown.

152nd Esk: Squadron emblem unknown. Unit flew P-7a.

161st Esk: Source: SAFO #51, Jul 89, "The Evidence of Photographs," Musialkowski; pg 86. Details: White "winged ermine" with pink or red shading under wings.

162nd Esk: Source: Same as above. Details: White "winged ermine" with light blue shading under wings. Note: Unit flew P-7a.

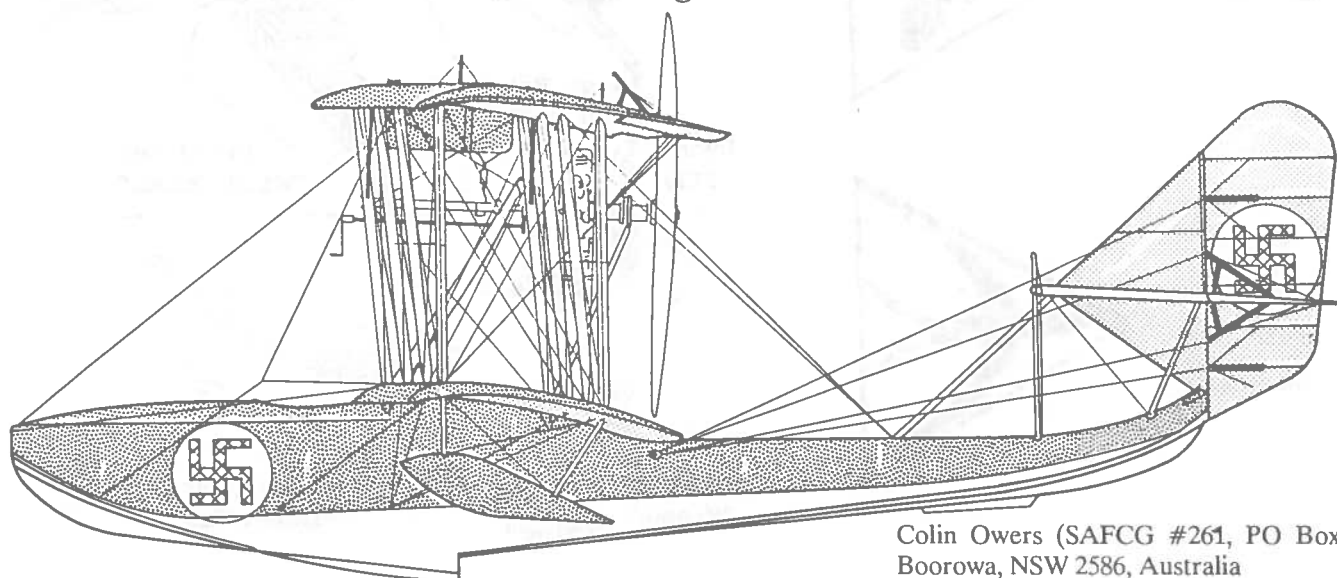
PZL P-11c PROFILES & KIT DECALS

Unit	L.W. Evidence #	R.I.N.	Aircraft Markings	Source :page	Remarks	141st	8.66	T66	"66"	D:23 (b/w) S4:85 S41:13	Lt Skalski's aircraft Kalkomania decals
Unknown	8.13	---	"3"	A:138 C:60 H:34 S51:89	Bogus "splinter" camouflage, from Nazi propaganda.	142nd	8.68	---	"68"	P75 T22 S9:10	Color of Esk duck wings in error. Colors correct. Revell decals, Colors in error.
111th	--	---	"3"	A:137	Revell kit decal Ruch kit decal	151st	Flew P-7a				
112th	--	---	---	F:84	Right side of aircraft shown	152nd	No known profiles or decals				
113th	--	N62	"2"	S29:10		161st	No known profiles or decals				
	8.39	N121	"10"	A:138 E:75 G:22 H:34 W:31 S51:89	Lt H Dudwal's aircraft, much photographed. Photo in S51 shows Evid# to be 8.79	162nd	Flew P-7a				
114th	8.132	N72	"2"	S4:73 S29:10 S41:14	Evidence # given R.I.N. given Kalkomania decals	K.O.P.	--	---	"4"	S51:86	Turkey emblem on right side.
121st	8.63	N39	"2"	A:138 H:34 S29:10	Should be K39 according to S29	"Korpus Ochrony Pogranicza" (Border Defense Corps)	--	---	"6"	S41:14	Lightning flash on wings, "aircraft from 161 Esk"
122nd	--	R36	---	S29:10	At CWL #1 Deblin still w/ 122nd markings	Defense	--	---	"10"	I:31	Turkey on left side, Lightning flash on wings.
	--	---	---	S29:10	No markings except Esk emblem	"K.O.P." on tail					
123rd	Flew P-7a										
131st	--	---	"3"	S29:10							
132nd	No known profiles or decals.										

SOURCES

A: Air International, Vol 5/#3, Sept 73.
C: Weale, Combat Aircraft of World War Two, 1985.
D: Shores, Duel for the Sky, 1985.
E: Parsons, ed., Encyclopedia of Air Warfare, 1974.
G: Munson, Fighter, Attack and Training Aircraft, 1969.
H: Green and Swanborough, Flying Colors, 1981.
I: Bauer, Illustrated Encyclopedia of World War II, 1981.
P75: Liss, Aircraft in Profile #75, "PZL P-11".
S4: SAFO #4, Apr 76, Cover Art by Choloniewski.
S9: SAFO #9, Mar 78, Notes by the Editor to "4th Pulk Lotniczy".
S29: SAFO #29, Oct 83, "PZL P-11c," Kowalski.
S41: SAFO #41, Jan 87, "Reviews," Sanders.
S51: SAFO #51, Jul 89, "Evidence of the Photographs," Musialkowski.
T22: Cieslak, Typy Broni i Uzbrojenia #22, "PZL P-11c".
W: Mason, War in the Air, 1985.

OWERS' Warbirds Finnish Girgorovich M.5



Colin Owers (SAFCG #261, PO Box 73,
Boorowa, NSW 2586, Australia)

LUCHTVAARTAFDELING INVENTORY (PART III) 1921-1924

Type	1920	1921	1922	1923	1924
Nieuport XI	26	-1	25	25	24
" XVII	5	5	5	5	5
Ansaldo SVA.10	2	2	2	-1	1
Bristol F.2B	1	1	1	1	1
Trompenburg V.2	46	-4	40	-1	48
Fokker C.I	58	-2	61	-3	58
" C.IV			+5	+14	31
" D.VII	18	+1	18	-1	17
" S.II				+15	14
" S.IV				+15	15
Total	156	+1 -7 150	+5 -3 152	+29 -6 175	+41 -1 215

Positive number are aircraft taken on charge, negative numbers are aircraft deleted, number without a sign are aircraft on charge on 31 December.

ADDITIONS

1921 Fokker D.VII	270 (rebuilt from 255 and 267)	1922 Fokker D.VII	261
1922 Fokker C.I	545-549 (built by LVA from spares)	Trompenburg V.2	48,77
1923 Fokker C.IV	550-563	1923 Fokker C.I	512,546,?
" S.II	84-98	" S.II	84
1924 Fokker C.IV	564-580	Trompenburg V.2	69
" S.IV	99-113	Ansaldo SVA-10	484 (at least before 1924)
Trompenburg V.2	18-26 (taken over from Navy)	1924 Fokker D.VII	254

WRITTEN OFF

1921 Nieuport XI	236
Fokker C.I	507,522
Trompenburg V.2	43,47,53,58

Several more trompenburg V.2 must have been w/o, but data are lacking. Some w/o C.I were rebuilt later. A number of Nieuport XI and XVII must have been w/o, but no records have been found

F. Gerdessen (SAFCH #12), Fijnscheerderstraat 12, 4204 ES Gorinchem, THE NETHERLANDS

AERO A-100 IN THE SLOVAK AIR FORCE

Juraj Rajnynec

After the dismemberment of the Czecho-slovak Republic on 14 March 1939, all the regiments of the Czechoslovak Air Force were disbanded except for the 3rd Regiment which was stationed on the territory of the newly independent state of Slovakia. The aircraft of this regiment thus became the foundation of the Slovenske Vzdušne Zbrane (Slovak Air Force).

Among the numerous aircraft types inducted into the SAF were 14 Aero A-100, construction numbers 2, 3, 4, 9, 10, 11, 13, 15, 16, 19, 24, 29, 30, and 32. Seven of these were assigned to Letka 64 (64th Long-Range Reconnaissance Squadron) at Piestany. The seven other A-100 were assigned to the Cvicna Letka (Training Squadron) at Vajnory.

Between April and June 1939, all SAF military aircraft, including the A-100, had the insignia of the Slovak Air Force applied in the usual six positions. This insignia consisted of a white-outlined double red cross within a blue disk. From 10 September 1939, this insignia was outlined with a 15-cm wide white circle. (See drawing A.)

When Letka 64 was disbanded in 1940, all serviceable A-100 in the unit were transferred to the Cvicna Letka, where they were used profitably for photo-reconnaissance training, pilot training, and for target-tug duties.

On 3 February 1941, the insignia of the Slovak Air Force was changed to a German-style insignia: a white outlined blue Balkankreuz with a red disk in the center..

When the Slovak Republic entered the war against the Soviet Union on 22 June 1941, a yellow band, 50-cm wide, was painted around the fuselage of all SAF aircraft. A similar 50-cm yellow band was also painted on the nose, although some aircraft had the forward 3/4th of their nose painted yellow. The outer 1/4th of the lower surfaces of the bottom wings were also painted yellow at this time. On some aircraft serving with the training squadron, a large letter "S" denoting the Flying School and a number denoting the aircraft within the School, were painted on the side of the fuselage. Three A-100 aircraft are known to have carried codes: S-2, S-21, and S-22. (See drawing B.)

During 1941-42, one after another of A-100 became unserviceable because of the lack of spare parts. The last Aero A-100 flew its final training mission on 9 September 1942.

A. A-100 of Letka 64, airfield Piestany, April 1940.

B. A-100 of the Cvicna Letka, airfield Piestany, September 1941.

C. A-100 of the Cvicna Letka, airfield Trencin, March 1942.

Juraj Rajnynec (SAFCH #98), Sov. Armady 41, 91101 Trencin, CZECHOSLOVAKIA.

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AERO MANUAL MiG-21, 40 pages, 21 cm by 30 cm, softbound. This second booklet in the Aero Manual series contains 9 pages of scale drawings of all MiG-21 version from F to bisM, 32 b&w photos of details, 3 pages of drawings of cockpits, 4 pages of stencils and their placement, a page illustrating alternate underwing-armament arrangements, and ten side-view drawings illustrating interesting color schemes (USSR, Israeli, Czech, & Egyptian) with colors identified in English. Of particular interest is a Russian MiG-21MF in a "mottled" camouflage scheme.

Other subjects planned for this series include the MiG-29, Su-25, Mi-17, & Su-15/21. The price of the MiG-21 booklet in Czechoslovakia has gone up 50% compared to that of the first Aero Manual on the MiG-23.

Daniel Petz (SAFCH #623), Na Ladvi 21, 18200 Praha 8, Czechoslovakia.

"I mentioned in SAFO #55 that Cato Guhnfeldt was working on a book about the Norwegian Gladiators. This book has now been published with the title 'Fornebu 9. April'. The author has clarified most of the remaining questions on the events of 9 April using material collected over 12 years of research in both Norway and Germany. The text is in Norwegian, but the 450 large photos, many never seen in print before, are easily understood. A summary in English may become available if there is sufficient interest. This book is available from: Wings, Box 2718 St. Hanshaugen, N-0131 Oslo, Norway. The price is 300 NOK (50-60 US\$) but this

does not include postage. Interested parties are advised to write Wings for postage rates, etc."

Knut Erik Hagen (SAFCH #904), Stamhusveien 67, N-1181 Oslo 11, Norway.



"I ordered my book on the Portuguese AF (see SAFO #56) from a specialized bookshop which is both efficient and fast: Librarie de Langue Por-

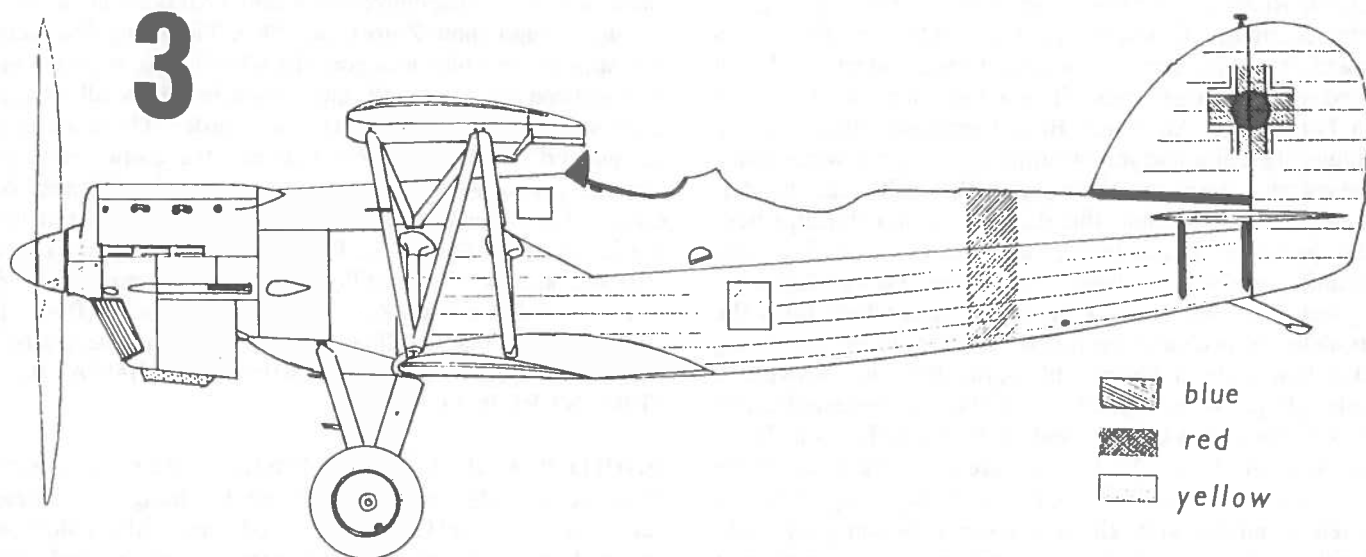
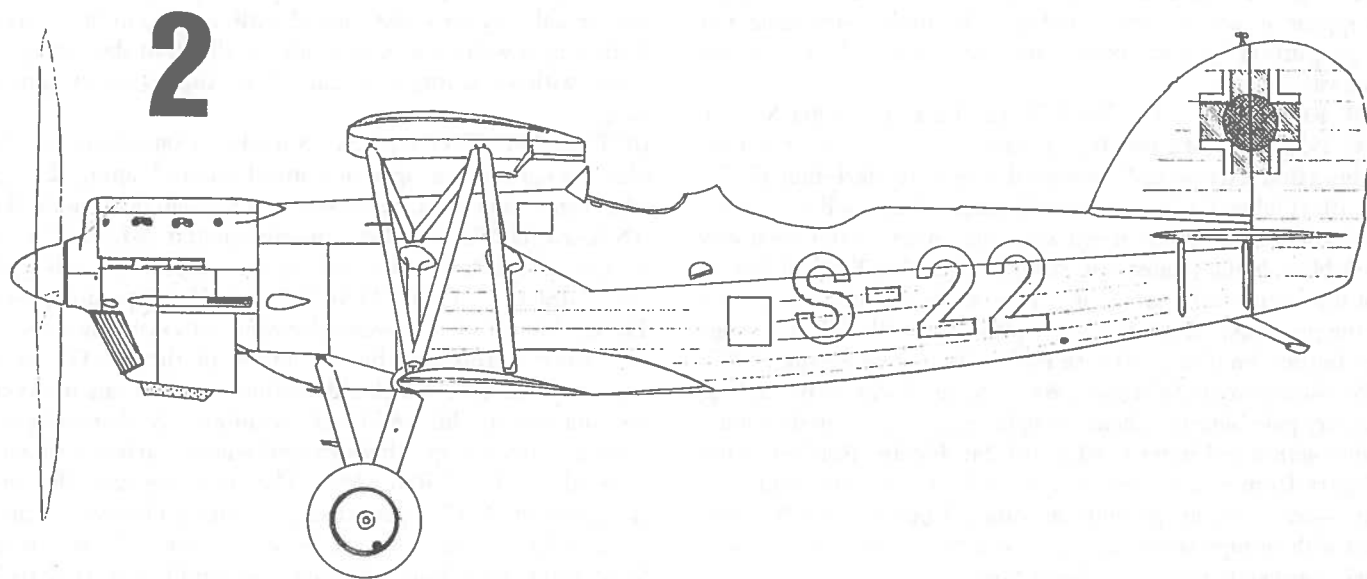
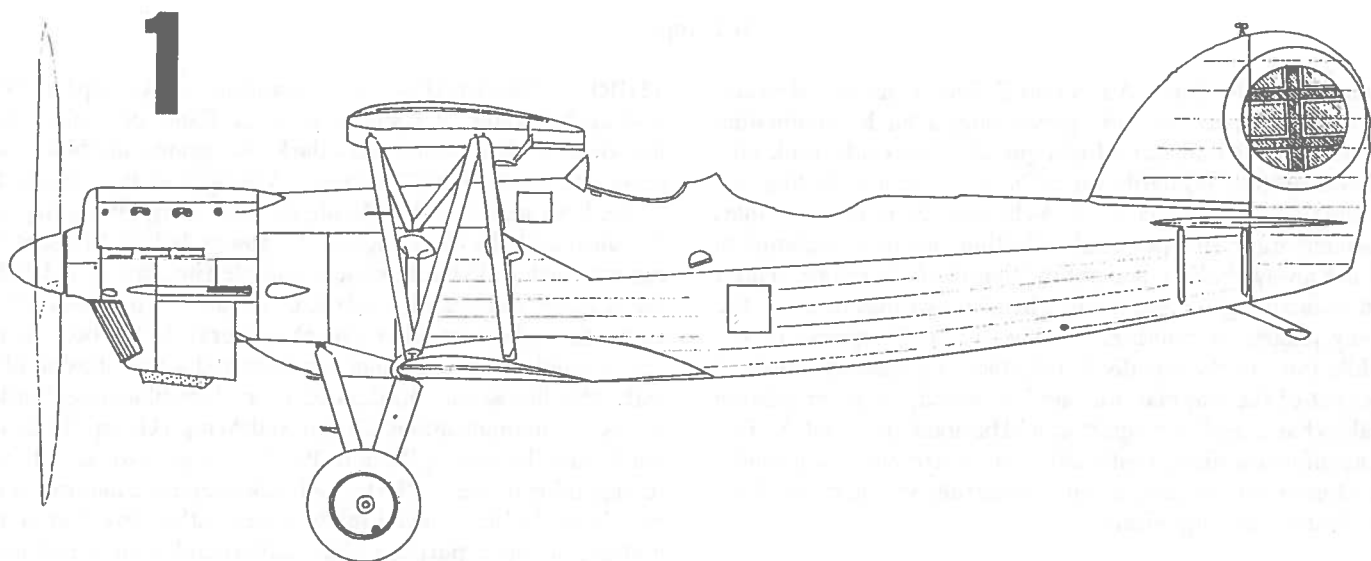
tugaise, 10 Rue de Tournefort, 75005 Paris, France."




Jean Yves Goffi (SAFCH #427), Residence Vallon ST. Hilaire - Bat 6, Rue de la Petite Porte, 76000 Rouen, France.

AEROFAX DATAGRAPH 7: BOEING B-52G/H STRATOFORTRESS, Jenkins and Rogers.

"This newest title from Aerofax Inc. contains 72 pages and approximately 250 photographs, including 8 pages of color. The text contains all available data describing the history of the late-model 'Stratofortress' family. Comparable detail is provided in areas such as performance, specifications, and related matters. The majority of the photos have been shot specifically for Aerofax, Inc. use. Many close-ups provide exquisite detail for the modeler, including rarely seen interior views of all crew stations, the landing gear wells, and the bomb bay. Standard Aerofax coverage of the engines, the landing gear, and all miscellaneous external parts also is provided. Textual coverage is equally as complete and includes, for the first time in any publication, a complete listing of all B-52G/H wings and their histories. Additionally, accurate multi-view drawings of the B-52G/H are provided on an eight-page fold-out.

"Typical of an Aerofax product, this book is produced to the highest standard in the printing industry; printed on enamel stock with a laminated soft cover. Price is \$14.95 and the Aerofax Stock Number is 0307."



 blue
 red
 yellow

ORGANIZATIONAL EMBLEMS OF THE BELGIAN AIR FORCE

Ted Koppel

(In continuing the "Small Air Forces Collector" series, a decision was made to streamline the proceeding a bit by eliminating depictions of AF badges for flight qualification, trade, rank, etc., and concentrate primarily on units, up to and including our favorite branch of service itself. As before, the random samples illustrated are from a personal collection, obviously incomplete and not always fully or accurately identified; therefore, reader input is encouraged ... especially when later we may return to the steamy jungles of South-East Asia, the arid expanse of the Middle-East, or the equally formidable (or pleasant) terrain in other out-of-the-way places around the world, wherever aviation heraldry has tested its wings. It should be noted here that "SAFC" has no official affiliation with SAFO; it is merely one enthusiast's contribution on one aspect, quite colorfully visual, of small air force history and organization.)

The Belgian insignia shown, in no particular sequence, on page 33 appear at 58% of their actual size. Not to the same scale, but in proportion to each other, are the additional illustrations herewith.

TOP ROW, LEFT TO RIGHT: (a) Fighter (Jacht) School, 1948-1958 (then Brustem Base); pale-blue bird with red arrow, within a thin red ring and inner border on a very dark-blue shield. (b) 7th (Fighter) Wing, 1950-1963 (then Chievres Base); light-blue wolf's head on bright red wings and inner border, on a very dark-blue shield. (Later also described as "3rd Tactical Wing", but this seems to be an error.) (c) A different (plastic) version of the previous; dirty, off-white wolf's head with dull-red wings and border, on black. (d) 13th Fighter Wing (Jachtwing), 1953-1958 (then Coxyde [Koksijde] Base); same design as preceding, but very pale blue-gray head on light-green wings, on dark-blue shield with a red inner border. (e) 2nd Fighter-Bomber Wing (Jagers-Bommenwerperswing), 1951-1971 (although new bore's-head insigne possibly introduced before 1971?); white bird with orange talons above a pale-blue tank, all on a very dark-blue shield with green inner border.

SECOND ROW: (a) Air Force Control Center (Opsporings en Controlecentrum Glaaien), 1951 (2 OCS) or 1961 (OCS Glaaien); light-blue arrow with yellow wings, intertwined with crossed red lightning flashes, all on a dark-blue shield with red inner border. (b) Air Force Base Command (Basis van de Luchtmacht); a blue and yellow propeller on orange wings above a blue cogwheel segment, all on gray with a white inner border. (A note dated 1976 claims this design to be for "Groupement Technique".) (c) Flight-Instruction Center (Vervolmakings Centrum), post-1962; five bright-red aircraft (Fouga Magisters) flying out of a blue book with white pages which form the contrails for the two outer aircraft, those for the inner three being black, yellow, and red. The pale blue-gray shield also has a green wreath and a yellow inner border. (Another source describes this as the AF "Perfection Centre". and the 1976 note labels it "Technical School".) (d) Meteorological Service or Wing [Meteorologische Dienst (1947), Korps (1954), Wing (1966)]; a pale-yellow sun and white cloud on a very light blue-gray shield with a thin red border, featuring a white-winged life-preserver with red and black details, against a blue sea and yellow hills.

THIRD ROW: (a) AF Missile Squadron(s) or Group?, c. 1959; a white Nike-Hercules missile with red flame on a black-bordered shield divided into very dark-blue upper and blue lower segments. the Group (Groepering Missiles) added a black star to the bottom, while the Missile Service Wing (Wing Support Missiles) added a black cogwheel segment, before changing the insigne further. [The illustrated sample (in plastic) is labeled "W.E.T.S.A." on the back.] (b & c) 9th and 13th Missile Wing, respectively; besides adding black numerals to the bottom, the background colors are a medium blue and a pale grayish-blue, with a thin black inner border and a very dark-blue outer border. (d) AF Communications Group and Wing (Groep Telecommunicaties, becoming Wing in 1966); pale-gray tower with two red lightning flashes at the top, a black telephone handset in the middle, and a blue winged shield (black with yellow lion) at the bottom, all on a purplish-blue background with a red inner border. (e) A.F. Operations Group (or perhaps Ground Ops?); the typical very dark-blue shield with a red thin inner border, displaying a white star and a smaller shield in the background color (with a red-tongued yellow lion) supported by light-blue wings.

BOTTOM SECTION: (a) 31st Squadron (Smaldeel); on a light-blue background, a tiger in natural colors leaping through a silvery-gray ring bordered yellow and red and bearing the motto "IN SANGUINE VINUM", and designated. "31 Smd.", topped by a multi-colored crown and resting on yellow scroll reading "BELGISCHE LUCHTMACHT". (b) 31st Squadron/"NATO TIGER MEET 1978" (as stated in white letters on the red scroll); the crown is replaced by an outline of the NATO emblem superimposed on a blue shield bearing a red lion, against a yellow disc outlines in blue and black. A differently-shaped tiger appears on a tiger-striped background, which also has designations "31 Smd. / KLEINE BROGEL". The outer ring bears the national flags of the NATO participants (counter-clockwise from the upper left): Canada, France, West Germany, Greece, Belgian (centered below), Italy, Norway, U.K., and U.S.A. (c & d) Two slight variations of the emblem of Kamina Air Base, in the former Belgian Congo (now Zaire), pre-1963. The Congolese yellow star appears on a blue hexagon with white wings, superimposed on a stylized fortification(?) and crown, in yellow, all on a gray diamond (lozenge) with a blue inner border. There are minor design and color differences between the cloth and plastic samples. (e) Anti-Aircraft Command; although in "typical" A.F. colors of a very dark-blue background with a thin red inner border, this is an Army unit. The yellow winged-arrow is superimposed on crossed red artillery barrels, (The emblem has also been referred to as "Anti-Aircraft Artillery School".) (f) Also not Air Force, this black, yellow, and red shield has been labeled "Air Raid Protection"; the motto on the scroll is, "IMPAVIDUM FERIENT RUINAE"

ADDITIONAL ILLUSTRATIONS (not to the same scale): (1) This metal badge on a leather pocket-hanger is labeled, "Belg.A.F. Logistical Command"; a red flame with a yellow edge swoops from a white gear-wheel segment to curve around a silver star, deeply incised into the surface. The border is also the silver (Continued on the bottom of page 29.)

Pawel Przymusiala

The absence of documentation makes it very difficult to discuss Polish aviation in the months immediately preceding the beginning of WWII. A newly discovered document or photo can completely alter previously strongly held opinions. A brilliant example of this is connected with my article, "The Supporting Cast" which appeared in SAFO #52. I am very happy to have the opportunity to provide an "errata" to this previously published information.

Among the letter that arrived after SAFO #52 was published, was a particularly exciting one. This letter was from Knut Erik Hagen (SAFCH #904) of Oslo Norway. Knut sent a copy of an article "Polakker pa Sola" by Sten Stenersen from 'Norsk Flyhistorisk Tidsskrift' issue 1-2/1989. This article consists of a short text and three b&w photos. But, what photos! These Photos, taken by Mr. Oddvar Simonsen at Stavanger-Sola airfield 20-25 September 1939, show several LOT Polish Airlines' L-14H Super Electras that had stopped in Norway while escaping to England. Two of these aircraft, SP-BPM and SP-BNF are easily identified. However, the poor quality of the photo reproduction makes it impossible to determine exactly how many different Electras were photographed. These photos caused much consternation among the Polish aviation historians to whom I have shown them.

The first noteworthy element (common to all machines) are the white/red stripes painted on both sides of both vertical fins and on top and bottom of the wings. It is also interesting to note that the antenna arrangements are different from those normally used. Another exciting element is the fully-glazed cockpit roof on all the L-14Hs. This modification is known to have been proposed in Poland just before the war, but it was not known how many aircraft, if any, received this improvement.

of the metal, (2) Similar to the above, although smaller, this badge is labeled, "Fighter Wing Bevekom"; a variation of (d), the light-blue wolf's head, with red mouth, is superimposed on green wings, all on a dark purplish-blue background with a wide border in orange-red. The outer border is the silver metal into which the design is affixed. (Note that both these shields are pointed, while the previous samples have rounded bottoms.)

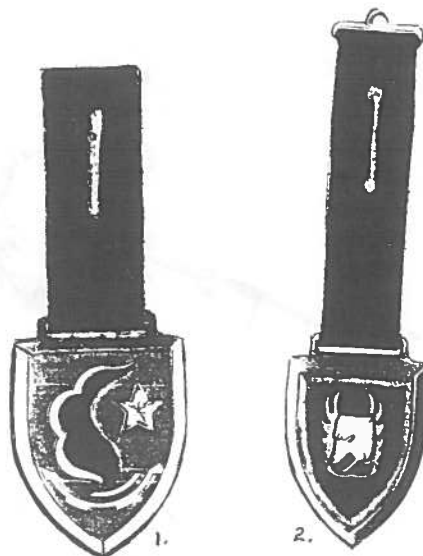
REFERENCES: Among several sources consulted, two provided the primary details, although not always agreeing exactly: IDENTIFICATION PAMPHLET NO.9: EUROPEAN FORMATION

Another interesting modification is visible in the third photo, which is the worst of the three. This was taken into the sun so that the aircraft is entirely dark. The registration is not visible, but some of the detail is visible on the nose. However, the most eye-catching element is a D/F loop fairing immediately behind the aerial mast. Since SP-BPM and SP-BNF are seen to have no such D/F loop, it seems we have a photo of the third LOT Super Electra, SP-LMK, which is known to have escaped to England. I would like to thank Knut Erik Hagen for his outstanding gift, the value of which is highly appreciated here. Knut modestly wrote: "These pictures might be new to you." They were "new" and they are great! First of all, they enabled us to see for the first time the war-time marking of Polish airliners, and they are probably the only existing photos of LOT aircraft carrying the color scheme used after the war's outbreak.

Pawel Przymusiala (SAFCH #801), ul. Długosza 8/27, 01-174 Warszawa, Poland.

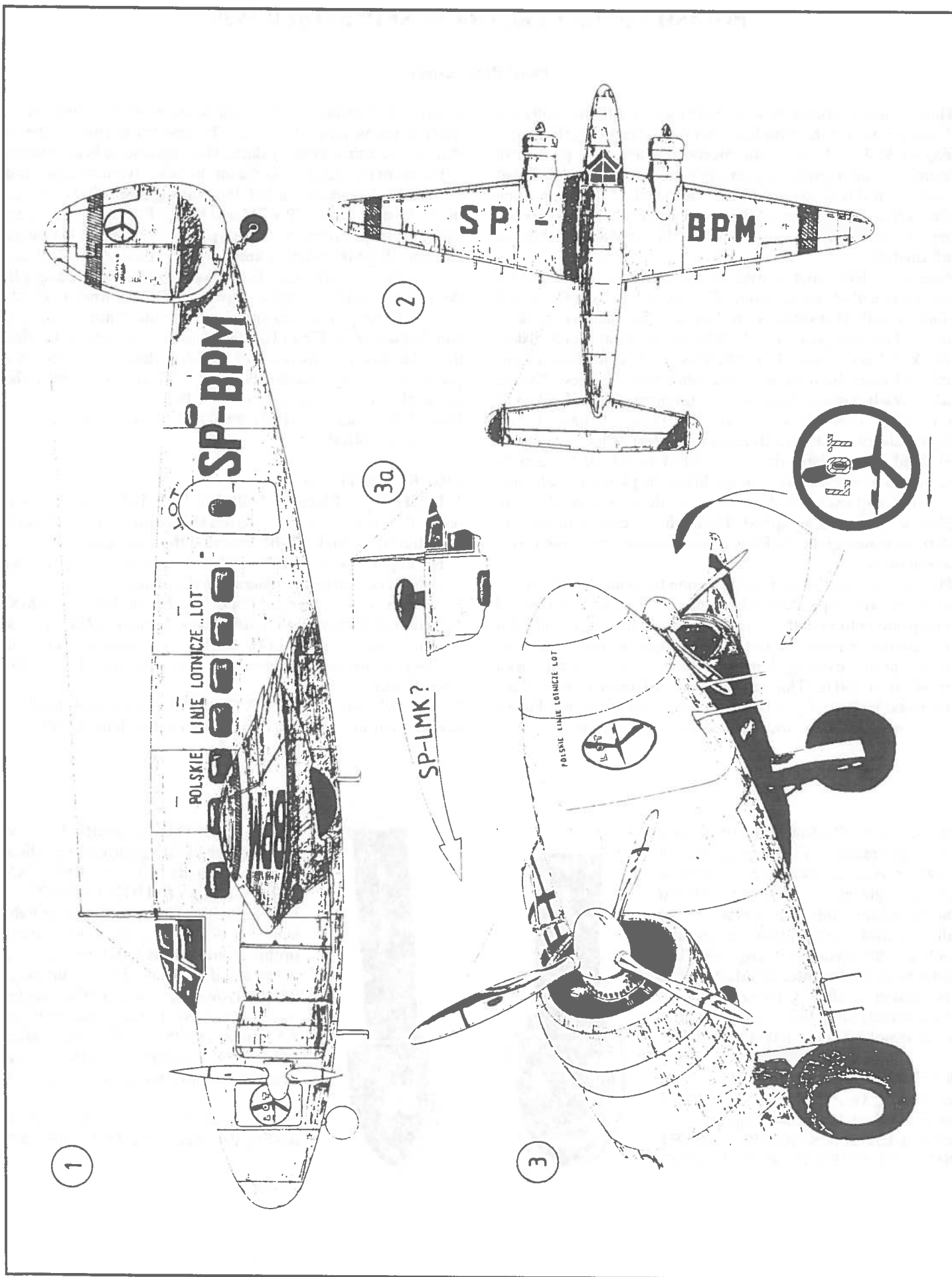
FIGURE CAPTIONS

1. L-14H Super Electra SP-BPM of LOT Polish Airlines was paint silver overall. Note white/red stripes on the fin and wings. All lettering is black. SP-BNF carried the same scheme.
2. The upper view of SP-BPM (SP-BNF the same). Note the way the white/red stripes are painted on the wings.
3. A scrap view of the third Super Electra, probably SP-LMK. Note the small inscription "Polskie Linie Lotnicze LOT" in black on the nose, above the LOT emblem. The inscription on the fuselage above the windows was probably absent from the aircraft only.
- 3a. The D/F loop on SP-LMK. This fairing is probably black.
4. Polish Airlines emblem is black with a dark blue "LOT".



SIGNS AND TITLES, PART I, by the late Maj. John Waring (privately published, n.d., but in the 1970s) and BELGIAN MILITARY AVIATION 1945-1977, by Paul A. Jackson (Midland Counties Publications, 1977). As most of our readers probably know, this latter volume is a goldmine of the most detailed information on. However, as some of the samples in the "Small Air Forces Collection" do not appear in either of the above references, other sources for further identification/clarification are required.

Ted Koppel (SAFCH #118), 3520 N. Rolling Rd., Baltimore, MD 21207-2202.

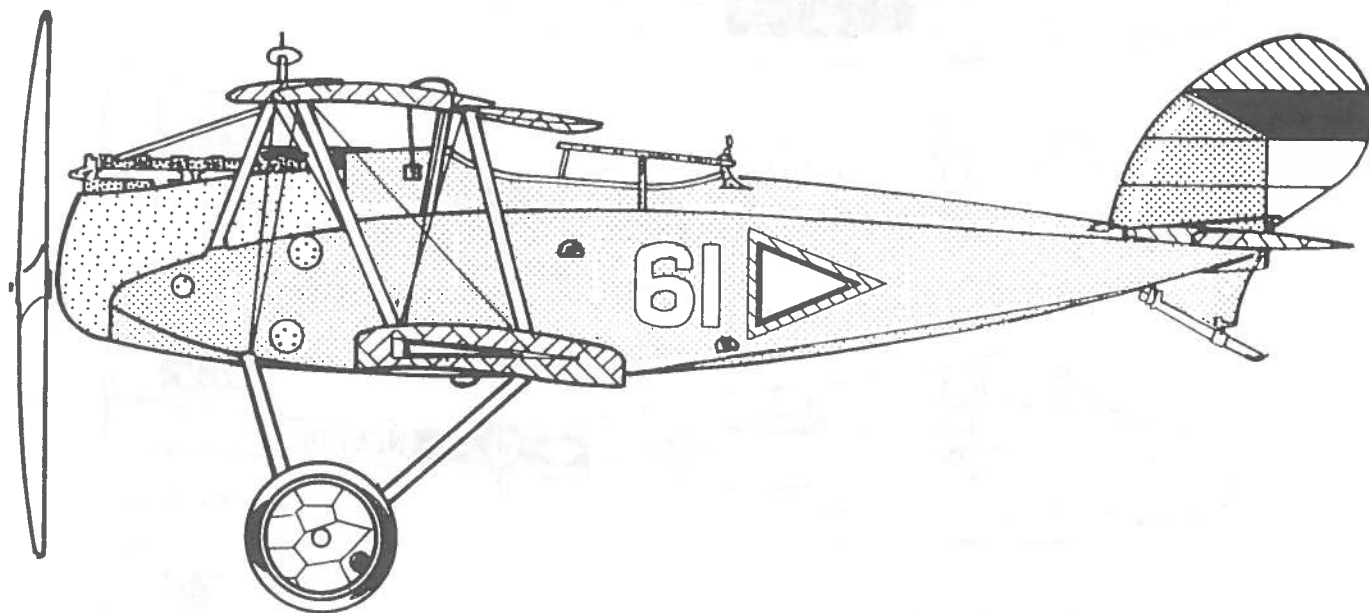


DH-100 VAMPIRE

1. Swedish Air Force Vampire MK. 1 in the mid fifties. Dark olive green on upper surfaces with light grey under surfaces. Letter K on fin is red with a white outline. National insignia in four positions (on top surface of wings only). Yellow 13 aft of national roundel. Yellow griffon on black shield under cockpit.
2. Dominican Republic Vampire Mk. 1 in same colors as above with national insignia in 4 positions (top surface of wing only). The crest of Escuadron de Caza-Bombardero under the cockpit.
3. Overall-silver Egyptian Vampire FB.52 with serial number 1529 and unique stripes on wings and booms. Stripes appear to be yellow and black. Reference: FLIGHT, 13 May 1955, p. 624.
4. Rhodesian Vampire FB.52 serial RRAF 133 with red arrow on nose. A mysterious white square in front of wind screen.
5. Royal Norwegian Air Force Vampire FB.50 with code B-AH and no other markings except for national roundels on the boom.
6. RNZAF Vampire Mk.5 serial NZ5774. (Wings of this aircraft were from a Vampire FB MK.9.) Aircraft carries the black and white markings of 14 Squadron and the roundel has a silver fern inside. Roundels in six positions. Fin flash on both side of fins. Black serial on under surfaces of the wing.
7. Vampire FB Mk.6 converted for target-tug service in the Swiss Air Force. Wings and fuselage in black dayglo-orange stripes. National insignia on wings outlined in white. Drop tanks dark olive-green upper surfaces and light blue-grey lower surfaces. Canopy frame, center section of wing, tail, and booms silver.

Robert Gretzyngier (SAFCH #887), Ul. Miaczynska 57A, 02-637 Warszawa, Poland.

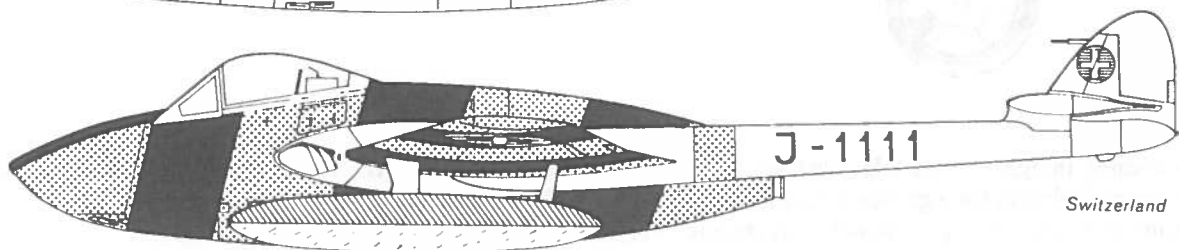
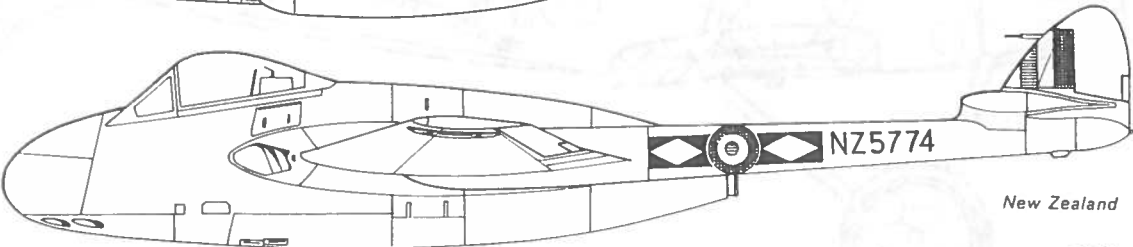
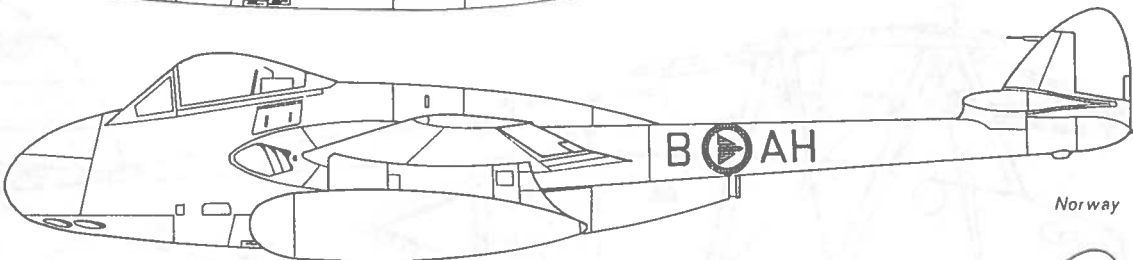
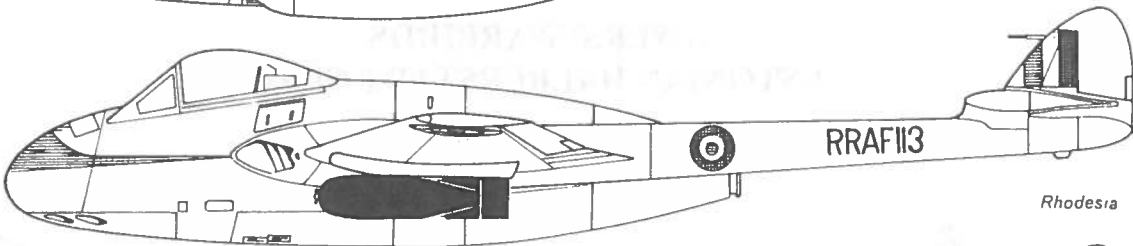
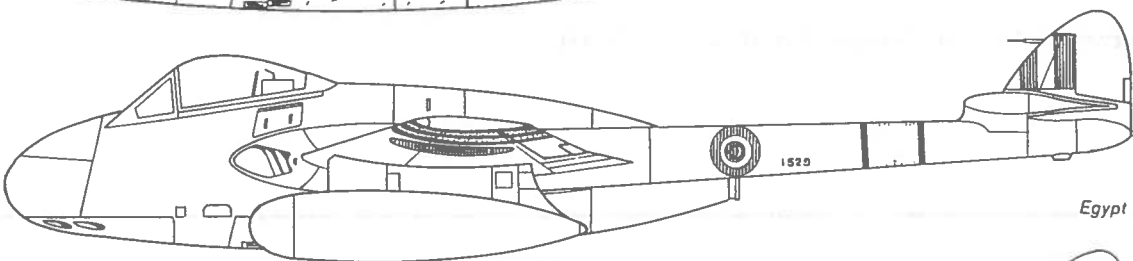
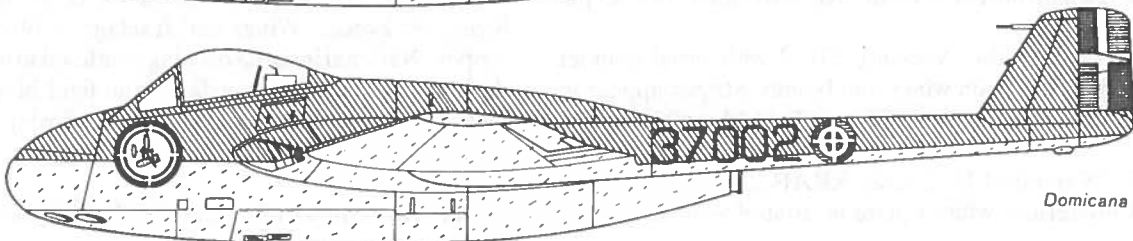
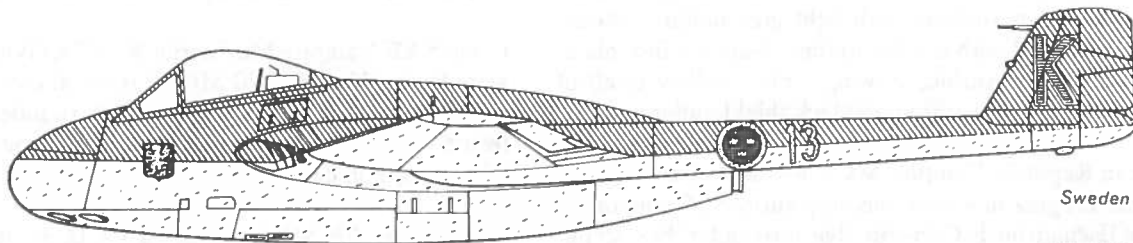
OWERS' Warbirds ESTONIAN HALBERSTADT CL.IV



National insignia: blue/black/white. Varnished plywood fuselage, losenge fabric on wings with over-painted crosses, and grey panels, struts, etc. Very battered appearance. White '61'.

Colin Owers (SAFCH #261), PO Box 73, Boorowa, NSW 2586, Australia.

VAMPIRE





Ied Koppel / SAFC 1989

